GUY'S
HOSPITAL
GAZETTE

Guy's Hospital Gazette.

NEW
SERIES
VOL. 56

1942

Guy's Hospital Gazette.

GUY'S HOSPITAL GAZETTE

VOL. LVI
(JANUARY—JUNE)
1942

NEW SERIES

1942

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GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News.

PUBLISHED FORTNIGHTLY.

Volume LVI — *10th January* 1942 — *Number* 1395

PASSIM

COINCIDENTAL with the recent expansion of Army recruitment, the call-up of qualified medical practitioners, particularly those who have just completed six months' house jobs, has occurred. The calling to the colours of these able-bodied young men has not met with the enthusiasm that one might have anticipated; rather have they tended to escape their honourable duty by the numerous avenues placed at their disposal. It is to be hoped that these individuals will correct their attitudes before the type of rot they represent spreads to other sections of the Services.

▭

Now that medical supplies from overseas are arriving here in a rather plentiful stream, it might be advantageous, at this juncture, to take stock of what we are receiving. While there might have been some justification for haste several months ago there can be little excuse for the trans-Atlantic shipment of discarded instruments and relics which years ago had found some out-of-the-way shelf, never to be uncovered again until some generous spirit decided that they would be useful in Britain. These articles represent a combined wastage of time, money, valuable shipping space, and good-will; the sending of ancient midwifery forceps minus a handle or two, heavy electrical apparatus long out of date is not the kind of equipment which may be calculated to promote gratitude. The appointment of a small qualified committee to sort out and choose the available material might prove a most expedient venture.

▭

THERE are many ways of fostering financial assistance to the Hospital, and one rather ingenious but not original method has recently made its appearance on London Bridge Station. It consists of a neatly painted bomb carcass standing upside down on a wooden pedestal; the detonator apparatus has been removed and the hole that remains is intended to receive the pennies poured into it by the populace. Alongside this repulsive object is a small cardboard sign attractively painted in red, white and blue (the distribution of the colours is quite fortuitous) which bears the following example of fine English composition:

It is a Good Thing
This "Jerry" 2000 Pounder Didn't Go Off
It Was a Bad Thing
Some Like It Did Go Off
In Guy's Hospital
Make This Collecting Bomb
Go Off With A Bang
By Bursting It With Coppers.

Apart from the fact that the statistical reference contained on the placard is something of a ten-fold magnification, the whole scheme must be regarded as cheap and unwholesome, and to which the name of Guy's Hospital ought not to be attached.

▭

WE regret to announce the death of Miss Florence C. Nott-Bower, the oldest surviving matron of Guy's Hospital. Between the years 1893–99 she did much to improve nursing conditions in the Hospital. A fuller obituary will be printed in a subsequent issue. A short Memorial Service will be held in the Chapel, to-morrow Sunday, January 11th, at 10.45 a.m., in association with the morning Service.

Some Problems of Aviation Medicine

By Group Captain J. J. Conybeare, M.C., D.M., F.R.C.P.

OBVIOUSLY in the comparatively short space at my disposal it is impossible to do more than touch upon certain of the more important and interesting problems which arise in aviation medicine. I have, therefore, selected for discussion the following subjects: the medical selection of air crews; blacking-out; anoxia; and the duties of a medical officer on an operational station.

MEDICAL SELECTION OF AIR CREWS.

Air crews comprise pilots, air observers and wireless operator air gunners. While the medical standards for these three groups vary slightly as regards vision, in other respects similar standards of fitness are required, as the work of all three groups involves more or less similar stresses.

The problem of satisfactory medical selection is one of the most important in aviation medicine. It costs, even reckoned in money, a very large sum to train an operational pilot and not very much less expenditure of time, energy and material is required for the training of other members of air crews. Every man who undergoes the whole or part of his training, but fails to become a satisfactory operational member of an air crew, is a dead loss of many hundreds or even thousands of pounds. Worse still in these times of war: he has occupied a vacancy in the flying training schools and has prevented other more satisfactory personnel being trained. It is, therefore, imperative that the medical examination for fitness for air crew duties should be such that there is reasonable probability that every man who embarks on his flying training will not break down or fail to become efficient from an operational point of view on account of any medical disability, which might have been discovered at his preliminary medical examination. Naturally such an examination must be more strict and searching than that carried out by the National Service boards organised by the Ministry of Labour. Consequently every candidate for air crew duties has to be examined by specially organised air crew medical boards, composed entirely of members of the medical branch of the Royal Air Force.

Family and Personal History.—The family history is mainly important in relation to the personal history, but it will often give valuable confirmatory evidence in the case of candidates who have doubtful personal histories, especially as regards nervous instability.

The personal history is specially important in relation to abnormal conditions of the nervous system. Any definite evidence of nervous instability, such as a nervous breakdown, habit spasms and ticks, nail biting, insomnia, sleep-walking or bed-wetting, especially when the latter has persisted into adolescence, are of the greatest importance. Air crew duties call for courage, determination and what is popularly termed "guts," which are unlikely to be found in persons with any psycho-neurotic tendencies. Consequently, where there is any doubt about the nervous stability of a candidate he should be rejected.

Attacks of migraine when associated with visual disturbances involve rejection for training, as do severe head injuries which have been followed by sequelæ such as recurring headaches. Needless to say, any evidence of organic nervous disease would also preclude training for air crew, with the exception of slight disabilities resulting from infantile paralysis.

On the whole it is found that the somewhat overweight have better staying powers than the underweight and the athletic than the non-athletic.

A history of pulmonary or pleural tuberculosis will entail rejection, as it has been found by experience that the strain of operational flying is very likely to provoke reactivation of an old tuberculous process. Organic non-tuberculous disease of the lungs, such as fibrosis, also entails rejection.

All candidates with organic heart disease, however well compensated, must be rejected, as also those who are specially liable to faints or attacks of giddiness. A history of sea-sickness, or sickness in trains, cars, swings or roundabouts is usually an indication that air sickness is likely to occur.

Any history of peptic ulceration, hæmatemesis or melæna or chronic dyspepsia precludes acceptance.

The physical examination of the candidate is not unlike that demanded by life assurance companies and comprises a careful and thorough examination of all the systems, including the eyes and ears, nose and throat. As the great majority of the candidates are young it is rare to encounter high blood pressure except in cases of nephritis. Frequently, however, the natural anxiety associated with medical examination may result in over-average readings of blood pressure, particularly systolic pressure. With reassurance and further readings the pressure almost always falls

to normal figures. A persistent systolic pressure of over 150 or of diastolic over 90 must be regarded with suspicion and will probably involve rejection. Abnormally low blood pressures, such as a systolic of 100 or below, are often evidence of cardio-vascular instability, and such persons are specially liable to attacks of faintness. They are, therefore, best regarded as unfit or deferred for re-examination at a later date.

Apart from special tests for ocular muscle balance and stereoscopic vision, the general examination does not involve any special tests which are not used in a routine life assurance examination, except in one respect. I refer to the so-called 40-millimetre test. The basis of this test is that the candidate blows up a column of mercury to a height of 40 millimetres and holds it at this level for as long as he can. While he is doing so the medical examiner counts his pulse and records the number of beats every five seconds during the test. A normally fit young man is usually able to maintain the column of mercury at a height of 40 millimetres for 60 to 80 seconds, and during this period his pulse rate, as counted at five-second intervals, should remain steady, though perhaps at a slightly higher rate than when at rest. A marked increase in pulse rate during the early part of the test, which is followed by a striking drop in the rate to a low figure such as 60 or below, indicates an unsatisfactory cardiac response. If organic disease of the heart and lungs is excluded, very few candidates show such an unsatisfactory performance with the test as to involve rejection. The 40-millimetre test imposes a certain amount of discomfort and, to some extent, it is a measure of a candidate's determination, as well as his physical efficiency. If a first attempt is unsatisfactory a further trial may be carried out after an interval for rest. The performance of the same individual in 40-millimetre tests done at different periods is often very helpful in assessing physical fitnes at the time of the test. Thus, after recovery from an illness such as pneumonia, a patient, who previously has been able to hold the mercury up for 70 seconds, is often found to give a poor response, while a month later the test may be as good as before his illness.

Albuminuria is not uncommon in young men of the age from whom air crew personnel are selected. Provided the blood pressure is normal and microscopical examination of the urine shows no appreciable number of red or white cells and no casts, the presence of albumin is not a cause for rejection. This is specially so if an early morning specimen of urine is free of albumin, though albuminuria recurs with exercise.

If sugar is found in the urine a blood sugar tolerance curve is usually advisable. If this shows a low renal threshold or a " lag " type of curve the glycosuria can be neglected. A diabetic type of curve, on the other hand, entails rejection.

BLACKING OUT.

The high speed aircraft used in the Schneider Cup Race in 1929 first brought to notice the phenomenon known as " blacking out." It was found that pilots doing steep turns at high speed suffered from a transient dimness of vision, which often amounted to a complete blacking out of vision. Occasionally, in addition to the visual phenomenon, there may be a very transient loss of consciousness. A similar result may follow pulling out from a steep power dive. Much research has been done to determine the causation of blackouts, and it has been found that the gravity factor, usually known as " g," varies directly with the square of the speed and inversely with the radius of the circle. The symptoms of a black-out do not usually appear until the body is subjected to a force of 4 to 5 " g." It would appear that during a steep turn the blood tends to be driven from the head and upper part of the body into the abdomen and legs. This results in a relative cerebral anæmia and the venous return from the lower limbs is retarded and consequently an insufficient supply of blood reaches the right side of the heart. There is a fall of pressure in the ophthalmic artery, which is perhaps also compressed by the intra-ocular pressure. Consequently deficient blood-supply to the retina may cause the loss of function known as blacking out.

A black-out is not necessarily dangerous and it may occur even in the most fit person if the stress of " g " is very great. Recovery is both rapid and complete as soon as the effects of centrifugal force cease. Air-crew, however, who suffer from black-outs with small degrees of centrifugal force, may need to be taken off operational flying, at any rate temporarily. Lack of physical fitness, as for instance after an illness, may lead to a temporary liability to black-out more readily than usual.

There is no sovereign remedy for blacking-out, but as has been said above, a high standard of general physical fitness goes a long way in helping to avoid the phenomenon. Abdominal belts, pneumatic or otherwise, have been tried, but probably good abdominal muscles are more effective in preventing pooling of blood in the abdominal veins. A crouching attitude may minimise the tendency of blood to be forced from the upper to the lower part of the body during a steep turn.

In certain manœuvres in which the effects of " g " are reversed, as, for instance, inverted spins, out-

side loops or " bunts," the blood is driven by centrifugal force into the head and upper portions of the body. In such cases, instead of blacking-out, objects in the field of vision appear red, and this is sometimes described as " redding-out." There is a feeling of severe congestion in the head and sometimes hæmorrhages occur in the conjunctiva or in the skin of the face and neck. " Redding-out " is of little practical importance as the circumstances under which it arises are not likely to occur except with an aeroplane out of control.

ANOXIA.

With the increasing height at which aircraft now operate the problem of oxygen want has become increasingly important. The symptoms of anoxia, or, as they are sometimes termed, altitude sickness, rarely become apparent until a height of over 12,000 feet is attained, and at this height exposure must be prolonged. The greater the height the more rapidly symptoms develop. It has been possible to study the effects of low atmospheric pressures in a decompression chamber, in which the pressure can be regulated to correspond with varying altitudes. At about 12,000 feet there is an increase in ventilation. Although the respirations are not increased in rate breathing becomes deeper. As height increases —or in a decompression chamber as the pressure falls—there is an insidious onset of drowsiness, fatigue even on slight exertion, a slowing of reaction time, euphoria or sometimes irritability, and a lack of concentration. These symptoms of anoxia occur, as a rule, quite without the knowledge of the subject. They may be strikingly demonstrated by getting him to do some simple act, such as adding rows of figures and recording with a stop-watch the time taken for each sum. Additions which can be done correctly at low levels in a few seconds may take twice as long at 15,000 feet and ten times as long at 18,000, and even then mistakes are frequent. The handwriting deteriorates and becomes eventually an illegible scrawl. As the height is increased to 20,000 feet or over, the drowsiness and lethargy pass into complete loss of consciousness. Raising the atmospheric pressure or the inhalation of oxygen produces disappearance of symptoms within a very short time.

There is very great variability in susceptibility to anoxia. On the whole, the more fit and robust a man is the better he tolerates anoxia, and in those suffering from fatigue, post-infective states and over-indulgence in alcohol, symptoms of anoxia tend to come on early and progress rapidly. Nevertheless, even in perfectly fit persons, there are wide variations in tolerance. The duration of exposure to low atmospheric pressures is important in its bearing on altitude sickness. Thus many people display little or no evidence of anoxia at 15,000 feet or even higher, if exposure is for half-an-hour or less. The longer the exposure the more likely are symptoms to develop. In addition, any form of even mild exertion is likely to precipitate symptoms.

The problem of anoxia can be dealt with by supplying oxygen through a mask or by keeping the crew in a closed pressure cabin. The former is the method mainly employed. Members of air crews, when likely to be at heights above 12,000 feet are supplied with oxygen masks which draw a supply of the gas from metal containers. The rate of oxygen flow is regulated by a valve, which is adjusted as required according to height. Provided the oxygen supply is working efficiently and the mask fits satisfactorily, no symptoms of oxygen want occur up to heights of 35,000 feet or even higher.

One of the great dangers of anoxia, especially as regards operational flying in war-time, is the risk of pilots or other members of air-crews becoming partially under the influence of oxygen want without their realising that they are doing so. The drowsiness and lethargy with loss of concentration, which may develop insidiously, may render a machine an easy prey to an enemy in full possession of his faculties. As the rate of climb of modern service aircraft is so great, it is important that the crew in any machine which is taking off for a flight to high altitudes should start taking oxygen immediately on leaving the ground.

For flights much above 35,000 feet oxygen administration through a mask is inefficient and a pressure suit is required. Heights well over 50,000 feet have been attained using this method of giving oxygen under increased pressure.

" BENDS."

It has been found that at heights above 30,000 feet members of air-crews not infrequently complain of pain usually in the neighbourhood of a joint. This starts as a comparatively mild ache, but if ascent is continued or even if the aeroplane merely remains at the same height, it becomes increasingly severe and sometimes of a quite excruciating character. With descent to lower levels the severe pain rapidly passes off, but a discomfort or ache sometimes remains even after reaching ground level. These phenomena are usually termed " bends." Just as with anoxia there is a marked variation in the susceptibility to symptoms in individuals, so also " bends " occur much more readily in some than others. " Bends " seldom occur below 30,000 feet, but

they are very common above 35,000 feet, especially if exposure to this altitude is prolonged for over two hours. Hitherto few machines, except fighters, reached these altitudes and then rarely for long, but with the advent of bombers with a high ceiling the problem is likely to become increasingly important in aerial warfare. In rare instances symptoms other than " bends " may occur, such as œdema of the lungs or symptoms indicating involvement of the nervous system.

The condition, which has been termed by Armstrong *aeroembolism*, is due to the formation of bubbles of nitrogen in the tissues. At sea-level the blood and tissues are fully saturated with nitrogen and when the atmospheric pressure is reduced there is supersaturation with the gas, which cannot be got rid of sufficiently rapidly through the lungs to avoid bubble formation. The body fats absorb nitrogen far more readily than do the blood and other tissues, and as the nitrogen can only be eliminated through the blood stream, those tissues which have a poor blood supply are most likely to be the seat of bubble formation. This explains the observation that overweight and obese persons are more liable to " bends " than are the spare and wiry type, and the relative poverty of blood supply to the tendons and fasciæ in the neighbourhood of joints is probably the reason why these regions are specially involved by " bends." It is, however, a curious fact that " bends " very rarely occur in two separate sites ; indeed, it is usually true that any individual who suffers from " bends " complains of pain in the same single area each time he ascends to the necessary height.

It has been shown experimentally that bubbles of nitrogen form in the cerebro-spinal fluid at relatively low levels such as 20,000 feet, which is far below the height at which " bends " are experienced. Curiously enough these cause no symptoms, and it is only at much greater altitudes that nervous phenomena such as neuritis, paralysis or unconsciousness develop.

The phenomenon of " bends " is in many ways comparable to that of caisson disease or compressed air-sickness. When the body is exposed to increased atmospheric pressure additional nitrogen is absorbed into the blood and tissues, which during decompression forms bubbles similar to those occurring in " bends." In caisson disease symptoms may be avoided by slow decompression, which allows the surplus nitrogen to be excreted from the tissues into the blood and thence through the lungs. No doubt " bends " could also be obviated if the rate of climb were sufficiently slow to allow this to take place. Unfortunately this would involve so slow a rate of climb as to be quite impracticable.

No remedy for " bends " is available once the condition has developed except to return to a higher atmospheric pressure by descending. If flights have to be undertaken at levels at which even the most insusceptible develop " bends," this is only practicable by the use of pressure suits or some form of pressure cabin aircraft. For the prophylaxis of " bends " it has been suggested that if oxygen is breathed for half-an-hour or more before ascent, much of the nitrogen in the tissues is eliminated. Such a procedure involves considerable difficulties, especially in operational flying when as ascent may have to be made at short notice.

Where high altitude flying for several hours is necessary an effort must be made to find pilots and air-crews who are relatively insusceptible to " bends." As has been stated above the heavily-built overweight type is less likely to be satisfactory than the relatively thin and wiry.

THE DUTIES OF A MEDICAL OFFICER ON AN OPERATIONAL STATION.

" Please don't send me to an operational station. There is no work to do." This unfortunate appeal is one that is sometimes made by a junior medical officer with no experience of operational work, who thinks he is the last word in orthopædics or some other specialty. Fortunately, with the war in its third year, it is heard but seldom, and for every medical officer who seeks to avoid an operational station there are at least ten to whom it is the height of ambition. While it may be true that duty with an operational unit is not the best preparation for the Primary F.R.C.S. or the M.R.C.P., it has become generally recognised that the good operational medical officer is playing a part which is only second to that of the pilots and air-crews. For wealth of experience, personal contact with the realities of war and real value, it is second to none.

Far from having " no work to do " the duties of a medical officer on an operational station are so varied and numerous that it is difficult to know how to begin describing them. Perhaps I may be allowed to classify them, though not necessarily in the order of their importance :—

1. *Sanitation and Hygiene.*—The station medical officer, and through him his assistant medical officers, are responsible to the Station Commander for the sanitation and hygiene of the station. A conscientious medical officer should make a point of ensuring that the facilities for washing and maintenance of pesonal cleanliness and hygiene are as perfect as they can be so far as the circumstances allow. Though there may be sanitary squads to do the work, personal interest and supervision is essential.

2. *Kitchens and Food.*—While the medical officer is not personally responsible for the feeding of the airmen on his station, it is his duty to see that the highest possible standard is maintained as regards cleanliness. Moreover, he should, in conjunction with the Catering Officer, ensure that faulty cooking does not impair either the food value or the vitamin content of the ample rations provided.

3. The station medical officer has also a certain amount of office work. He is responsible for clinical notes about his patients, returns and forms being filled up correctly, the arrangement of medical boards, examinations of personnel ordered overseas and many other matters.

4. *Sick Parades and Care of the Sick.*—While the percentage of airmen reporting sick may be small the actual numbers to be seen may be considerable. Moreover, there is a station sick-quarters, where patients with minor maladies are retained up to about a week. The number of beds will naturally vary with the size of the station.

5. *The Care of Flying Personnel.*—This is without doubt the most important of the duties of an operational medical officer. Living as he should on the station and being in daily or even hourly contact with the air-crews, whether officers or sergeants, the medical officer has an unequalled opportunity to observe them both in health and disease, and to detect the earliest signs of deterioration, physical or mental. The officers present no problem, for he will meet them in the mess. The non-commissioned ranks are not quite so readily contacted, but there are ample opportunities of meeting and getting to know them in the crew rooms, dispersal points and on the aerodrome. The medical officer will be present when they take off on a sortie and will be waiting for them on their return. He will also fly with them as often as his duties allow him. In peace-time medical officers were encouraged to learn to fly, but although this is, unfortunately, not feasible in war-time, they must take a real and personal interest in aviation problems.

Prolonged and intensive operational flying imposes a strain both physical and psychological, which few can stand up to continuously for an indefinite period. The medical officer who is in daily touch with his air-crews has unequalled opportunity for detecting evidence of fatigue and stress, long before it is likely to manifest itself by obvious symptoms. The right type of operational medical officer, who has the confidence, not only of the flying personnel, but of his squadron and station commander can do a great deal to prevent the onset of a breakdown. In the case of operational fatigue as in most other illnesses "a stitch in time saves nine," and one of the most important duties of the medical officer is to ensure that there is no lack of vigilance on his part in the detection of what may be called operational fatigue or flying stress. The medical officer should, therefore, take every opportunity he can of seeing and meeting his air-crews socially, at their play and during their duties. When he has opportunities to do so he should be with them when they are being briefed for operations and at their interrogation when they return, for their demeanour on these occasions may give him valuable information.

6. *First Aid.*—When an aircraft crashes the medical officer should, if possible, be among the first of the rescue party. Often the work of extricating casualties from a crashed plane calls for the utmost skill, courage and determination, and not a few medical officers have gained *kudos* at their stations and, in some cases, even a decoration for gallant rescue work.

At any time an Air Force station is liable to a "blitz," and the arrangements for the prompt collection of casualties devolves to some extent on the medical officer, who is responsible for the training and instruction of first-aid parties.

Such, then, is a brief outline of some of the more important duties of a medical officer on an operational station. What, then, are the qualities which one must look for in the selection of the ideal medical officer for such duties? In the first place he must be young enough to be able to be regarded as an elder brother by the flying personnel, who are in the main very young. On the other hand, he must be old enough to command their respect and to have the confidence of his seniors, such as the station commander. Secondly, personality is all important. He must be a good "mixer" and is often faced with problems which call for tact and firmness. He should be free from personal idiosyncrasies and "cranks" and be tolerant and sympathetic. He must inspire feelings of both friendship and confidence. While there is certainly no advantage in being teetotal, it is most important that alcohol, even at the most merry party, should never cloud his judgment nor impair his readiness to meet an emergency. Thirdly, and perhaps the most important point of all, he must have real enthusiasm for his work to the exclusion of any other interests, marital, domestic or financial which may conflict with it. The medical officer who lives off the station, rarely comes into mess and who is obsessed by problems outside the service, is completely useless from almost every point of view.

In short, he must be so far as in him lies a guide, philosopher and friend to all with whom he comes in contact.

List of Guy's Men serving in the Army Dental Service and A.D. Corps

Lieut. H. R. P. Annett.
Capt. R. G. Archer.
Capt. H. M. D. Archibald.
Capt. D. E. Ashdown.
Capt. J. L. Badgett.
Capt. E. R. Bailey.
Capt. K. C. Baker.
Major I. A. Barlow.
Capt. J. M. Barnes.
Capt. W. B. J. Baskin.
Capt. A. E. Baxter.
Capt. E. A. Beach.
Capt. S. W. Beales.
Lieut. F. N. Beken.
Lieut. A. H. Bell.
Lieut. O. R. Berry.
Capt. R. G. Bird.
Capt. N. A. Blay.
Capt. C. H. Blockley.
Capt. F. J. Bloor.
Capt. C. B. Boyd.
Major W. G. Bradbeer.
Capt. W. H. Branson.
Capt. T. A. Brimmer.
Lieut. J. Bromley.
Lieut. T. P. Bromley.
Major R. W. F. Brotherton.
Capt. C. K. Brown.
Lieut. G. M. A. Brown.
Capt. W. R. C. Brown.
Lieut. R. W. D. Brownlie.
Lieut. R. S. Bruce.
Major G. L. N. Burden.
Capt. S. E. Burt.
Lieut. W. F. A. Butcher.
Capt. P. M. Calder.
Capt. J. C. Carr.
Capt. L. M. Cartwright.
Lieut. P. A. Chandler.
Lieut. T. A. Chandler.
Colonel G. F. Charles.
Capt. C. A. Chaundy.
Lieut. A. D. Chick.
Capt. T. H. Chignell.
Capt. F. W. Clare.
Capt. E. L. Clark.
Maj.-Gen. D. Clewer.
Capt. J. C. Coe.
Capt. L. C. Cohen.
Capt. N. B. Coltart.
Lieut. R. S. Cook.
Capt. E. H. Cooper (*Prisoner of War*).
Capt. S. H. Coplans.
Lieut. R. J. H. Corfe.
Lieut.-Col. T. D. Corke.
Capt. P. H. Crampton.
Major F. W. Crook.
Capt. E. P. Cutler.
Major E. J. Dalling.
Capt. A. A. Danino.
Lieut. R. G. Daplyn.
Lieut. R. R. Darracott.
Capt. T. S. Davidson.
Capt. G. F. Daws.
Lieut. D. F. Denniss.
Capt. J. L. Deuchar.
Capt. J. A. Dossor.
Capt. E. M. Douglas.
Capt. J. G. Douglas.
Capt. G. R. Down.
Capt. G. R. G. Druce.
Capt. W. F. Dunn.
Capt. F. C. Dutton.
Capt. V. R. Dyke.
Capt. F. H. Edey.
Capt. F. J. H. Edmonds.
Capt. J G. T. Edmonds.
Capt. H. E. Edney.
Capt. J. R. Entwistle.
Lieut. R. J. Eustace.
Capt. A. E. E. Farara.
Capt. R. E. C. Farrant.
Capt. G. Fellows-Smith.
Capt. G D. Fleetwood.
Capt. P. Fletcher.
Lieut. N. L. Forrester.
Capt. E. G. Foulston.
Capt. D. P. Fox.
Capt. H. Fox.
Capt. E. J. Freeman.
Capt. H. D. Freeman.
Capt. M. A. Freeman.
Capt. H. C. French.
Capt. J. H. French.
Lieut. D. W. Friendship.
Capt. J. H. R. Gaffney.
Lieut. A. M. Garman.
Major J. L. Garrard.
Lieut. K. A .Gateley.
Capt. J. B. Gayes.
Capt. K. C. Gebbie.
Capt. P. Gerrard.
Capt. W. F. Gibb.
Capt. E. E. Gibson.
Capt. A. R. Gillies.
Capt. C. Glover.
Capt. D. W. Goodman.
Capt. A. Gorton.
Capt. A. E. Grace.
Capt. G. E. Graham.
Capt. C. H. Greaves.
Capt. H. Greaves.
Lieut. C. B. de V. Green.
Lieut. R. C. Green.
Capt. K. H. Greenwood.
Capt. F. A. Gresham.
Capt. R. J. Grewcock.
Capt. P. Griffin.
Capt. W. H. Groom.
Capt. S. W. Guilding.
Capt. H. Hack.
Capt. C. I. Hagger.
Lieut. F. C. Hampson.
Capt. J. G. Hancock.
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Capt. S. Hanreck.
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Capt. M. C. Hart.
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Lieut. C. S. Henderson.
Capt. H. G. Hexter.
Lieut. J. R. C. Hindle.
Capt. F. S. Hobbs.
Capt. A. W. Holman.
Capt. P. K. Hopkins.
Lieut. R. G. V. Houlson.
Capt. W. B. Hubbard.
Capt. A. Hurston.
Capt. D. A. Ibbetson.
Major E. C. Irish.
Capt. K. A. Irish.
Capt. L. M. Irwin.
Capt. W. E. Jackson.
Capt. C. H. James.
Capt. F. K. Johnson.
Capt. G. M. Johnson.
Capt. S. E. Johnson.
Capt. H. G. Jokelson.
Lieut. R. C. Jones.
Capt. K. A. Keith.
Capt. H. D. Kendrick.
Capt. R. L. Kenyon.
Capt. R. G. Kett.
Capt. E. J. F. King.
Colonel R. M. King.
Capt. R. V. Kingham.
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Lieut. S. J. G. Knott.
Capt. P. D'O. Kolesar.
Capt. G. W. Lawrence.
Capt. G. A. Lawson-Brown.
Capt. C. M. Leckie.
Lieut. E. C. Lewis.
Capt. H. J. Lewis (*Prisoner of War*).
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Major B. S. Mead, M.B.E.
Capt. A. Middleton.
Capt. E. P. T. Miles.
Capt. S. G. Miron.
Capt. L. J. Moir.
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Capt. W. R. G. Morris.
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Capt. H. M. Norman.
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Capt. A. M. Pollard.
Capt. F. St. J. Powley.
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Capt. B. T. C. Probert.
Capt. A. Pryor.
Lieut. R. F. Pusey.
Capt. L. A. G. Quick.
Capt. G. E. A. Ralston.
Capt. D. J. Rees.
Lieut. C. A. Reynolds.
Capt. A. D. W. Robertson.
Lieut. J. C. Robertson.
Capt. P. K. Robinson.
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Lieut. N. L. Rowe.
Lieut. G. J. Rubie.
Capt. C. F. L. Ruck.
Capt. F. W. Rushby.
Capt. J. F. Russell.
Lieut.-Col. A. F. Salsbury.
Capt. V. S. Sams.
Capt. F. W. Sander.
Capt. J. H. Sarginson.
Capt. S. P. Saunders.
Lieut. G. W. Sawyer.
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Capt. A. Southwell.
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Capt. G. Sperryn-Jones.
Lieut. P. d'E. Spooner.
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Major E. D. Stanhope.
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Capt. D. J. Wandless.
Capt. S. J. F. Webb.
Capt. R. J. Wheatley.
Capt. C. M. White.
Lieut. E. D. Whiteley.
Capt. I. E. W. Whitling.
Capt. U. L. M. Whitling.
Capt. K. J. Whittten.
Capt. R. E. Wiles.
Lieut. J. E. Willett.
Capt. G. V. L. Williams.
Capt. I. D. C. Williams.
Capt. H. F. J. Willis.
Capt. G. Wilshere.
Capt. D. S. Wilson.
Capt. I. C. Wilson.
Lieut.-Col. S. H. Woods, O.B.E.
Capt. H. A. Woodward.
Capt. G. R. Wootton.
Colonel W. R. Wotton.
Capt. T. D. Wren.
Lieut. C. G. Wright.
Capt. E. W. Wright.
Capt. S. F. Wright.

Sector News

Pembury Letter

CHRISTMAS has come and gone, but the memory remains of one of the most enjoyable weeks that the season has brought. Such is the general feeling among those who are beginning to shake off the post-festive stupor which settled over us like a thick mist when the festivities ended.

The difficulty in getting supplies only stimulated ward sisters and catering staff to greater efforts and, at the finish, a succession of meals appeared in the wards and dining-rooms that would satisfy the most ravenous appetite and stimulate the most fastidious palate. There were teas in the wards for the patients, for the patients' friends, for the nurses, for the ward clerks, and finally just teas. Separate Christmas dinners were held by the residents, sisters, day nurses, night nurses and non-nursing staff. This was done, we believe, to satisfy Dr. Grasby's craving for turkey and plum-pudding. Most of the residents, too, managed to have three or four dinners to their credit.

Christmas Day was seen out by a dance and another saw in the New Year; and if 1942 is to be as crowded as the floor was at midnight it should, indeed, be eventful. Our congratulations go to those who were responsible for the organisation of all these festivities and, in particular, to Matron, Miss Fagelman, who should be more than satisfied with the success of her first Christmas at Pembury.

It was once the custom at Guy's—maybe it still is—that the presence of a student at a lecture was indicated by his signature on a piece of paper provided for the purpose. To overcome any difficulty that its absence might cause, friends were schooled in the art of reproduction and, wherever the owner, the signature duly appeared. Now there is a small book in the Senior Common Room here in which those learned gentlemen should record their presence in the Hospital, and it is with much distress that we have noted that this art, which, no doubt, was once so assiduously acquired has been lost to the extent that the most unpractised eye is no longer tricked.

G. L. L. R.

The Wildernesse Letter

WE were all disappointed when our Sister Catering's name failed to appear in the recent Honours List as the result of her efforts during Christmas. In her, Lord Woolton, we have a very real friend.

Many people from outside gave kind assistance to the Staffs in the endeavour to maintain the best Christmas spirits. A concert was given and the Hospital was attractively decorated. We hope the patients enjoyed themselves as much as we did.

As threatened in our last dispatch we gave the New Year a very cordial welcome. Now gaiety is behind us and we are getting down to the work which shows every sign of increasing.

Our Nursing Staff has been in part replaced, and so we send our "Ave" and "Salvete" to those concerned.

Already we have missed the weekly visits of Mr. Atkins, and to him, wherever he may now be, we send good wishes.

Owing to an outbreak of epidemic parotitis, our student ranks have been reduced by 50 per cent., but "Tommy" carries on the noble work with a smile on his face.

The Works Department have been redoubling their efforts recently on our latest building, and it should not be long now before we become the Sector's hub of deep X-ray work.

We wish space and Mr. Editor would allow us to tell more of what happens at the Wildernesse. On receipt of a stamped envelope, however, we are prepared to disclose how one of our Borough child-patients treated one of our stately fireplaces, which, up to that time, had harboured only the lordliest of logs and the most aristocratic of ashes.

H. P. J.

Sport

Rugby

GUY'S *v.* LONDON HOSPITAL.

(At Honor Oak Park on Saturday, October 25th.)

THIS was Guy's fifth match of the season and the fifth victory. It was not such a convincing win as previous performances, but this was no doubt due to the excellent spoiling by London's forwards and the inability of Guy's three-quarters to finish off their movements.

As Sharpe was unable to play, Dean was introduced as hooker, and, judging on this display, with a little more experience, he may easily solve that difficult position when Sharpe is away. Strathie also was an absentee.

Guy's kicked off and immediately attacked the London line. Two bouts of passing was followed by Gartrell receiving a bad pass when a score seemed possible. Swann was prominent in a forward rush and then Dean broke away from a loose scrum, making a lot of ground before being tackled. Camp made an opening by cutting across field with Breen-Turner backing up; the latter took the pass, but a scrum followed a dropped pass.

London seldom got away from their "25," but spoilt all Guy's efforts to score. Hildick-Smith got through but kicked over the dead ball line, and after some good handling by the outsides, twice in succession dropped passes robbed Guy's of a score. London were compelled to touch down when Swann kicked ahead, and a little later a scrum followed a line out, from which Lillywhite broke clean through to send Hildick-Smith over for Mullins to convert.

There was no further score in the first half, although Breen-Turner once ran half the length of the field before kicking ahead when hemmed in, and later Brangwin almost got over on his own.

The early stages of the second half saw both sets of forwards going down on the ball to stop rushes. Camp followed up to tackle the full back, but London relieved with a kick to touch, which was followed by Lillywhite finding touch near the corner flag. London tried to break clear with some short passing on their line, but from a bad pass back the ball went over the line, and Renton touched down for a try which Mullins converted.

Some spirited play followed; Breen-Turner and Swann had a run together with some good handling, and Scott almost sent Gartrell over, but the latter was well held by Ross. Camp caught the ball from a cross-kick, and Albers took the return cross-kick nicely, but a scrum ensued. With Gartrell and Camp well marked there seemed no hope of a score from the wings, and from a loose scrum Brangwin made a fine burst to score an unconverted try.

The rest of the play was somewhat scrappy, and Guy's forwards had to go to the rescue of their outsides when passes were dropped. London tried to make progress with kicks to touch without result. Camp was covered on the line, and ran inside for Breen-Turner and Scott to carry on the passing, and the latter was only pushed into touch a few yards from the line. Mullins kicked ahead, but London's full-back called for a "mark," Scott tried to steal away on the blind side, and Lillywhite, Brangwin and Camp had a nice bout of passing just before no-side.

Score: Guy's, 2 goals, 1 try (13 points); London Hospital, nil.

Team.—T. L. T. Lewis; R. F. Camp, P. L. Brangwin, G. Hildick-Smith, P. C. Gartrell; W. H. Lillywhite, N. I. Scott; B. H. Wilshere, R. A. Dean, A. B. Lee, A. G. Albers, J. Breen-Turner, G. F. Swann, T. W. Renton, M. R. Mullins (captain).

GUY'S *v.* OXFORD UNIVERSITY.

(At Oxford on Saturday, November 1st.)

GUY'S managed to beat Oxford University at Iffley Road by the narrowest of margins, but recent performances of the Dark Blues indicated that they are below their usual standard. It was generally agreed that in this game the University showed much improved form.

With the exception that Dean was retained as hooker in the enforced absence of Sharpe, Guy's played their strongest team.

It was a keen game with defence supreme over attack, and although there were occasions when a try looked possible, play for the most part was centred in mid-field, with both sides indulging in some hard scrummaging.

The tackling also was hard and vigorous, and whenever either side threatened danger they were met with a stubborn resistance. All the scoring took place in the first half from kicks.

Things looked bad for Guy's when Oxford led by 6 points as a result of two penalty kicks scored by Darcus. Guy's made a few attacks, but it was left to Lewis, the full-back, to come right up field and drop a very neat goal. Close to the interval Oxford were penalised and Mullins kicked a goal to place Guy's in the lead.

The second half was similar to the first, all attacking movements being smashed by hard tackling and both sides determined to keep their lines intact, which they succeeded in doing.

A try nearly came to Guy's towards the end of the game, when Gartrell knocked the flag for a "touch-in-goal," following an opening by Scott and Strathie.

Score: Guy's, 1 drop goal, 1 penalty goal (7 points); Oxford University, 2 penalty goals (6 points).

Team.—T. L. T. Lewis; R. F. Camp, P. L. Brangwin, W. H. Lillywhite, P. C. Gartrell; D. M. Strathie, N. I. Scott; B. H. Wilshere, R. A. Dean, A. B. Lee, A. G. Albers, J. Breen-Turner, G. F. Swann, T. W. Renton, M. R. Mullins (captain).

GUY'S *v.* NORTHAMPTON.

(At Northampton on Saturday, November 8th.)

THE visit of Guy's attracted a good attendance and, after a hard and spirited game, Guy's thoroughly deserved their victory of 9 points to nil.

It was not a spectacular game and open movements were few. Much of the play was spoilt by a Northampton back-row forward being constantly off-side, which the referee allowed to go unchallenged, and this affected the play of Strathie, who could not rid himself of the attentions of this gentleman. Perhaps it is unfair to criticise the referee's control of the game, but if the rules had been interpreted in the correct letter of the law some more combined movements would have been the result and infringements properly penalised.

Without question the star forward was Wilshere, who played a sound all-round game. In recent matches he has put up some fine performances, his dribbling being particularly good, but in this game he was admired in every branch of forward play.

The Northampton side made a spirited start, and several hearty rushes set them on the attack until Guy's developed greater dash in the open and struck back hard. There was practically nothing between the two hookers to give any advantage from the set scrums, but in the loose and the line outs Guy's had the measure of their opponents.

The only score of the first half came from a quick

heel, which led to some combined play by Strathie, Mullins and Brangwin, until eventually the ball reached Camp, who crossed for an excellent try, which Mullins failed to convert.

Northampton took up the attack after the interval, but they were gradually worn down by Guy's sound defence, and their forwards carried play into Northampton's "25." Albers scored a grand try from one of Guy's rushes when he gained possession to run for the line, he feinted to pass, but, to everybody's surprise, he kept going and touched down for an unconverted try.

Guy's were awarded a penalty almost near the touchline, and taking careful aim, Mullins landed a goal with an excellent kick. This concluded the scoring and Guy's retired worthy winners.

Score: Guy's, 1 penalty goal, 2 tries (9 points); Northampton, nil.

Team.—T. L. T. Lewis; R. F. Camp, P. L. Brangwin, W. H. Lillywhite, P. C. Gartrell; D. M. Strathie, N. I. Scott; B. H. Wilshere, R. M. Sharpe, A. B. Lee, A. G. Albers, T. R. Wooldridge, G. F. Swann, T. W. Renton, M. R. Mullins (captain).

Hospital Information, etc.

Correspondence

News from Lt.-Col. G. T. Hankey

To the Editor of the GAZETTE.

SIR,—Following your publication of extracts from a postcard of mine to R. C. Brock, I am delighted to acknowledge letters from Worthington, Richardson, Lewis, Mill, Harding, Selby, Weston. It is impossible to thank all personally, much as I should like to. It is most interesting and cheering to hear the news from such scattered friends; I wonder at H. J.'s being unexpurgated. Life here now is really not too bad; the Red Cross and Y.M.C.A. are splendid and save the situation. My duties are M.O. to a camp of men, easier than anything I have known since student days. All are fit and well. I now have a Canadian padre as companion. Best wishes to all.

Yours, etc.,
G. T. HANKEY,
Lieut.-Col (R.A.M.C.).

Pass List

UNIVERSITY OF OXFORD.
2ND B.M. EXAMINATIONS.
Michaelmas Term, 1941.

Pharmacology and Principles of Therapeutics.
C. S. Gardner — C. C. Kennedy

General Pathology and Bacteriology.
M. R. Mullins.

Forensic Medicine and Public Health.
M. R. Mullins.

Medicine, Surgery, Midwifery.
J. Pinching.

UNIVERSITY OF CAMBRIDGE.
FINAL M.B. EXAMINATION.
Michaelmas Term, 1941.
PART II.

Principles and Practice of Physic, Pathology and Pharmacology.
J. W. A. Crabtree — N. Gillman
D. G. Vulliamy

UNIVERSITY OF LONDON.
SECOND EXAMINATION FOR MEDICAL DEGREES.
December, 1941.

M. A. Barker — J. S. Ebsworth
K. R. Brookes — W. E. Macbean
A. B. Dickie — J. D. Whitehouse

Papers by Guy's Men

Maizels, M. Clotting in filtration of Citrated Plasma. *Lancet*, 1941, ii, 7[illegible].

Mutch, N. Pfeiffer's Bacillus (Influenzal) Meningitis. *Ibid.*, 751.

Jacoby, N. M. Pfeiffer's Bacillus Meningitis. Recovery with Chemotherapy. *Ibid.*, 753.

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Ogilvie, W. H. The Treatment of Abdominal Wounds. *J. Royal Army Med. Corps*, 1941, **77**, 299.

Changes of Address

Covell, Gordon, C.I.E., Colonel, I.M.S., Malaria Institute of India.

Kreiser, H. A., Lieut. R.A.M.C., c/o Grindlay & Co., Ltd., Bombay.

Limpenny, F. T. J., Lieut. A.D. Corps, c/o Glyn, Mills & Co., Kirkland House, S.W.1.

Simons, John, J.P., Major, 220th Field Ambulance, A.P.O.

Middle East Awards

O.B.E. (Military Division).

Temp. Lieut.-Col. E. R. Boland, R.A.M.C.

New Year's Honours

M.B.E. (Military).

Surg.-Lieut. E. A. Spouse, R.N.V.R.

O.B.E. (Military).

Captain (Temp. Major) D. E. Denny-Brown, R.A.M.C.

Prisoners of War

A. D. W. Robertson, Capt. A.D. Corps, reported missing; believed prisoner of war in course of recent operation Middle East.

Reported Missing

Surg.-Cmdr. Douglas Arnold Newberry, R.N.

Deaths

KIRKMAN.—On December 16th, 1941, Mary Louise, wife of Dr. A. H. B. Kirkman, of "Bangweolo," Staplehurst, Kent, and late of Seaton, Devon, and Queenstown, South Africa.

BOWER.—On January 1st, 1942, Florence C. Nott-Bower, Matron Guy's 1893/99; aged eighty-five.

WEBB.—On December 15th, 1941, Eric Austin Webb, M.R.C.S., L.R.C.P., at Abererri, New Castle, Emlyn, younger son of the late W. J. Webb, J.P., and Mrs. Webb. House Surgeon at Swansea General Hospital.

EDS. { N.A.N. / B.S.L.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *24th January* 1942 — *Number* 1396

PASSIM

FEW people realise the extensive social service that is afforded by the Venereal Disease department at Guy's Hospital. Since its inception in 1921 it has come to be recognised as one of the pioneer organisations of its kind, and it would be an underestimate to claim that it has always afforded the latest methods of diagnosis and treatment, for, in spite of their rather conservative scientific scepticism in accepting new additions to the literature, several members of the department have been responsible for many original contributions in their field; in fact, the latest form of treatment for gonorrhœa is the result of their original researches.

While the V.D. Department tends to be tucked away in an unobtrusive part of the Hospital, the tendency for it to go unnoticed and unglorified is compensated for by the high esteem and good-will shared by all its patients and by the high standard of the results achieved with their co-operation. It must be remembered that every patient is a voluntary one and, by his complete trust and confidence in the department, enables himself and his contacts to receive treatment and to be socially rehabilitated without any damage to his reputation or position which would inevitably result should the world at large learn the nature of his illness.

Unfortunately the lay public tends to regard venereal infection in much the same light as plague and leprosy, and seeks to ignore the growing problem by burying the proverbial head in the sand; the unfortunate sufferer is regarded, not as a sick person, but as a social outcast. As a result victims of this disease, often relatively moral and innocent individuals, tend to linger in an untreated condition rather than risk social condemnation. Fortunately in the Male and Female Departments of the Guy's V.D. clinic, the outlook is very different and the patient is shown respect, sympathy and consolation which he seldom expects. What is needed, therefore, is a campaign of intensive education to teach the public to seek early and regular treatment by taking advantage of the facilities offered to them by the various V.D. Departments throughout the country. More will be attained by this method than by the *compulsory* notification of all V.D. cases which to-day is more than a possibility.

THE rapid shrinkage in size of the *Gazette* during these past few months has been a direct result of the need for strict economy in the use of paper throughout the country. This is to be regretted but is inevitable, and so requires no apology; further cuts or the adoption of a reduced issue will be taken should the situation demand it in the future. The Hospital, as a whole, has become extremely paper-conscious as a result of the paper salvage drive inaugurated by the Superintendent and which has proved extremely successful. It is very important that this drive should continue without loss of enthusiasm; nevertheless, it is difficult to gain encouragement from the recent actions of the minor Government official who, snooping around the College, proceeded to claim the right to requisition whatever books he could see through the windows, without bothering to ascertain the correct person to whom his powers, if any, should have been presented. It is true that at times red tape has proved a menace to the national war effort, but there are still occasions when a civil approach will produce more results than the methods of the Gestapo.

THE appointment of a resident dental house surgeon will be welcomed by all. So far the Hospital had depended at night-time upon the accidental presence of a qualified dental surgeon doing his medical course for the treatment of urgent dental cases, but since dentists are no longer to be allowed to start on their medical training, the time would soon have arrived when these men would no longer have been available. The authorities might well consider whether closer co-operation between the medical and dental house officers in general might not be advisable. The dental house officers are at some financial disadvantage compared with their medical colleagues. By allowing them to have their lunch and their tea in Nuffield House, this would be remedied to some extent and they would also be given more opportunity to make contact with their medical colleagues.

Obituary

MISS FLORENCE MARY CELIA NOTT-BOWER

A GREAT personality has vanished from the Guy's family—Miss Florence Mary Celia Nott-Bower, whose death took place at Kew on New Year's Day, a month before she reached the age of eighty-five. She was the oldest surviving Matron of Guy's Hospital.

Miss Nott-Bower was the daughter of the late John Bower, D.C.L., of York, and the sister of the late Sir William Nott-Bower, Commissioner of Police of the City of London.

After completing her training as a Lady Pupil at Guy's (1883 to 1885) and some subsequent experience as a Sister of the Hospital, she became Matron of Huddersfield Infirmary (1889), but after a year returned to Guy's as the Lady Superintendent of the Guy's Trained Nurses' Institution (1889 to 1893), from whence she sent nurses all over the world.

From 1893 to 1899 Miss Nott-Bower held the post of Matron to Guy's Hospital and, during her term of office, with the help of the Late Sir Cooper Perry, completely reorganised the system of nursing and the conditions of the nurses' life. With foresight and breadth of vision she took a close interest in the plans of the Henrietta Raphael Nurses' Home, which, opened in 1902, was the first nurses' home in Europe to have a swimming pool attached and single rooms for nurses with hot and cold water in each room and other modern amenities. With Mrs. Lauriston Shaw, wife of the Dean, she originated the Nurses' Choral Society, the Bicycling Club and other nursing activities. She had an outlook far in advance of her years.

In presenting her with two illuminated books containing the signatures of all the Governors and Nurses V. M. Carey wrote: "The figures 'Enterprise' and 'Benevolence' in our design represent two characteristic features of your work—the first in our *War Nurses; the second in the Hostel." What she did for the Chapel everyone knows. Mr. Lushington, the Treasurer, inscribed on the gold watch he presented to her the words: "To Miss Nott-Bower, in grateful recollection of her invaluable services to Guy's Hospital."

It is not possible to catalogue the many nursing and philanthropic activities which occupied her during her long life. All who remember her speak of the high ideal of competence and gentleness and the aspect of nursing as a vocation which she constantly held out to her Nursing Staff. After her resignation from the Hospital she devoted her energies to religious work in the Railway Mission to South Africa, the Yatsley Mission and among the munition workers of Gretna Green

Miss Nott-Bower possessed a deep sense of humour and a forceful personality and she exerted a powerful influence for good amongst the many people with whom she came in contact.

In her latter years she suffered severely from osteo-arthritis, but bore it with characteristic pluck and maintained her keen interest in social, political and religious affairs to the end.

Representatives of the Guy's Nursing Staff attended the funeral service which was held at St. Luke's, Kew Gardens, on January 5th, and a memorial service took place in the Chapel at Guy's Hospital on Sunday, January 11th.

*The contingent of Guy's Nurses who were sent out to the South African War.

Heart Size and Heart Murmurs

A Lecture delivered at Guy's Hospital on March 14th, 1941, by Maurice Campbell, O.B.E., M.D.

GENTLEMEN,—Heart disease may be diagnosed either on symptoms or on physical signs. To-day I want to talk to you about physical signs, and so I must point out that there are certain conditions where symptoms are much more important and where one cannot rely on getting any confirmation from physical signs. Fortunately, however, the diagnosis of most heart conditions is associated with physical signs. I would like to stress two very important conditions in which the main reliance must be placed upon symptoms—acute myocarditis and angina pectoris.

Difficulty should not arise with myocarditis because the patient is probably in bed already with some sort of febrile attack that is known to affect the heart, and this and the pyrexia will draw attention to the risk that he may have some cardiac condition. Even here I must stress one common exception because the most important form of myocarditis, that due to acute rheumatism, is nearly always associated with physical signs, and it is the fact that rheumatic myocarditis often meaning rheumatic pericarditis and nearly always endocarditis, that assists the diagnosis by producing physical signs.

In angina pectoris also, I would like you to think of symptoms rather than signs. The diagnosis must be made on symptoms and must not be ruled out because no confirmation from physical signs is forthcoming. Generally there will be some signs but they are not likely to be very significant or decisive.

There is a third group of cases in which one depends partly on symptoms and partly on physical signs, but this is excluded from our talk to-day. I refer to signs of cardiac failure, a big subject by itself, and I will only remind you that it takes three main forms. The first is congestive cardiac failure, when the symptom of dyspnœa will draw attention to it, but confirmation will be by physical signs, such as œdema of the feet, enlarged liver, and signs at the bases of the lungs. The second is left ventricular failure with signs of acute pulmonary œdema or congestion of the lungs and symptoms of cardiac asthma. The third type is angina pectoris, which is another main form of heart failure.

Those are the important cardiac conditions that I am excluding to-day; I want to discuss, rather, the physical signs in a case which may come before us either in a routine examination with no symptoms or because some symptoms have led to doubt about the heart's condition.

I.—ENLARGEMENT OF THE HEART.

I am dividing my subject into—(1) heart size and (2) murmurs. The size of the heart is one of the most important single parts of the examination in every patient; and, in general, when a diagnosis of heart disease is made, the size of the heart is the best measure of how severe the condition may be. Symptoms are again very important from that point of view; but limiting it to physical signs, the loudness of a murmur does not mean that the case is a serious one or a soft murmur that it is not: the size of the heart does give a good measure. With one important exception, heart disease of any serious extent is uncommon without cardiac enlargement. The exception is, again, angina pectoris, and there it makes little difference to the prognosis whether the heart is enlarged or not. But with most heart conditions, whether revealed by physical signs or not, the size of the heart is likely to be of the greatest help in classifying the patient in a slight, moderate, or more severe category.

Palpation of the Apex Beat.—In deciding the size of the heart one method of examination is enormously more important than any other—namely, palpation of the apex beat; that alone should settle the degree of enlargement of the heart in most cases. If the patient is thin there should be no difficulty in assessment whether he is lying down or sitting up. If he is fat or has an emphysematous chest it is more difficult, and the patient should be sitting or standing and leaning rather forward so that the apex beat is brought into the best position for one to decide where it is. One thing that may give rise to difficulty is the question of localisation. It may be possible to feel the apex beat over a considerable area, and sometimes in a thin nervous patient with no cardiac enlargement one may put one's hand well out into the axilla and count the heart rate, That does not mean that the apex beat is there, but merely that the movement is transmitted to the chest wall by the heart. The position of the apex beat is the point furthest out at which a real thrust against the fingers can be felt. You know then that you are at the apex beat and are not dealing with pulsation transmitted along the chest wall.

There has been a good deal of discussion in recent years on the value of physical signs in settling the size of the heart, and some people have rather loosely said that X-ray examination is the only method. But you will be very unpopular with your patients if every time you want to settle whether they have got an enlarged heart they are charged a large fee for an X-ray examination, and it is only in doubtful cases, such as I will mention in more detail later on, that resort to X-rays is essential. In most cases there should be no doubt, and my own view, on comparing a good many patients in whom the size of the heart has been decided before X-ray examination was made and then confirmed by X-rays, is that the measurement should generally be correct to within a centimetre.

The Normal Position.—Having decided where the apex beat is, the next question is where it ought to be and what is evidence of enlargement. The nipple line has been used traditionally and it is said that the apex beat should be just inside the nipple line. Others declare that it is too variable and that the mid-clavicular line should be taken, and I agree this is the point one should try to determine in most patients. Even so the position of the heart varies with the shape of the chest and some allowance has to be made for a long narrow or a short broad chest in deciding whether the heart size is normal. One is really making a complex judgment, looking at the patient's build, the shape of the chest, and the mid-clavicular line, and then deciding whether the relationship of these and the position of the apex beat is within one's experience of the normal or not. If the chest is long and narrow, the heart will be long and narrow; if the chest is short and broad, the same will apply to the heart, but even so the apex beat

must be allowed to be relatively further out in a thin narrow chest than in a short broad one.

The standard position for the apex beat is in the fifth space. I have seen applicants for life insurance rejected or referred to somebody else because the apex beat was said to be in the sixth space. There, again, the shape of the chest is important, and the mere fact that the apex beat is in the sixth space with the long narrow chest and the long narrow heart is not pathological. It is the position from the mid-line that matters rather than any actual level; when making a note of where the apex beat is, one should always measure it from the mid-line. That is not a very great help in settling at the time whether the heart is enlarged and I am not going to give any figure of what the measurement should be, but it is of the greatest value in deciding whether the heart has become larger or smaller in the course of time, and that may be just as important as the actual size at the time the examination is made. It is well always to express the measurements in centimetres, because it is small changes that are being dealt with, and to talk of quarter or half inches is not sufficiently precise.

So much for the left border, which is the most important. I have said nothing at all about percussion. In spite of all that is taught in the early stages, percussion, I think, has no place in deciding where the left border of the heart may be. It is true that in a thin patient it will often agree with the position of the apex beat, but it does not strengthen the decision already made as to the position of the beat.

The Right Border of the Heart.—Coming to the right border of the heart, there is no method available except percussion, and percussion is, on the whole, useful and accurate for the right border. One is dealing here with a much more horizontal part of the chest wall and the border of the heart turns back more sharply. In the normal there should be dullness just coming to the right of the mid-line, but not appreciably beyond the sternum. Dullness to the right of the sternum means enlargement of the heart to the right. There is no confirmation of this except where the heart is found by palpation to be grossly enlarged, and one has to rely on percussion so far as the right border is concerned.

Radioscopy.—I want here to say a few words about X-ray examination as regards the size of the heart. One may say that the X-ray image is not strictly a physical sign; nevertheless it is closely associated with it. I advise acting on one rule, namely, that if it is thought clinically that the heart is enlarged but it is not known why, the diagnosis should never be accepted without X-ray confirmation. I am sure that rule will be a means of avoiding many mistakes. There are exceptions, as there are to most rules, but if one is dealing with a patient who is relatively fit and the question of cardiac enlargement is of fundamental importance, the rule should be applied strictly. One reason is that some degree of fibrosis of the lung that has pulled the heart over may have been missed, and another is that it is easy to overlook a slight degree of scoliosis; it is surprising what a small degree of scoliosis pushes the apex beat a little out to the left so that the heart appears to be enlarged, and this is one of the commonest causes of error in judging heart size in children and young people. X-ray examination always furnishes much more information than the mere size. Its value falls into three special categories. The first is the one I have just mentioned, when there is doubt as to whether there is enlargement, and here it is essential because this is such a fundamental sign. The second is for accuracy of measurement. Many different methods of measuring the heart have been devised and probably the most accurate one can get is a comparison of the heart weight—which must vary to some extent with the heart surface that is seen in the X-ray picture—with the weight of the patient. Measurements of the heart can be taken to try to get the surface areas. But a simple method of measurement is nearly as good as any of these more elaborate ones, and that is the maximum transverse diameter of the heart compared with the chest size. The maximum transverse diameter of the heart should be less than half the transverse diameter of the chest. This allows for the thin narrow chest and is a good rule in doubtful cases. In the case of a narrow chest in a small person it is possible that a heart diameter of over 10·5 cm. may be a little larger than normal. In the average-sized patient it is necessary to go carefully when this measurement reaches about 11·5 cm., and in bigger men anything beyond 12·5 cm. must always be regarded with the greatest suspicion. This measurement of 12·5 cm. is really a very critical one, and unless the patient has an exceptionally big chest and is of big general build, measurements above that indicate enlargement.

The third special value of X-ray examination, into which I will not enter to-day, is the information it affords about the shape of the heart and the different chambers, and the greatest help may be obtained in the details of the examination to an extent that can never be afforded by physical signs alone.

I should like to stress two other points about the shape of the heart which should be borne in mind when making an X-ray examination or when

observing physical signs without X-rays. In many cases of well-marked mitral stenosis and in other cases with enlargement of the pulmonary roots percussion will enable one to demonstrate the changes by the undue degree of dullness. The other point is extreme pulsation in the epigastrium; the main part of the surface of the heart is formed by the right ventricle and a big right ventricle will give very noticeable pulsation. Those are useful points, not as reliable as the much more accurate X-ray shadow, but nevertheless of assistance when it is unobtainable.

Hypertrophy and Dilatation.—With regard to heart size, one should familiarise oneself with the feel of the big hypertrophied heart. In many cases, on putting the hand on the præcordium in the dark without knowing what part of the chest that one is touching, one can tell that one is dealing with a hypertrophied heart. The thrust behind is so forcible that the diagnosis can be made with certainty.

I have spoken about cardiac enlargement rather than dilatation or hypertrophy. In the old books there was a good deal of differentiation between these two, but generally it can be taken that an enlarged heart is both dilated and hypertrophied and it will be unwise to try to distinguish the different degrees. There is one exception, namely, acute infection. If a heart enlarges quickly under observation, or if it is found that in a patient who is in bed with a temperature the apex beat is out, it may be that it is pure dilatation from which the patient will recover quickly in the course of the next few weeks as he recovers from the infection. Aortic stenosis is said to produce hypertrophy without dilatation, and, to some extent, it is true that hypertrophy may be very marked without any great increase of size. In all other groups one generally finds both changes taking place progressively together.

II.—HEART MURMURS.

I come now to the second part of my subject, which is murmurs. Diastolic murmurs are much simpler to deal with than systolic, and therefor I take them first. When you notice your seniors listening to the heart they generally remark that there are diastolic or systolic murmurs without apparently timing them. It becomes easier with practice to detect the rhythm and to say whether a murmur is diastolic or systolic without consciously timing it, but in doubtful cases the murmur must be timed. In early stages, until one feels quite certain, one should always check which is the systolic period and which the diastolic by the carotid pulsation. The short delay in reaching the radial pulse makes it more difficult to associate these two, and the pulse should be taken in the carotid and not in the radial.

Aortic Regurgitation.—The diastolic murmur is easier than the systolic because the former always means organic disease. A diastolic murmur at the base of the heart practically always means aortic regurgitation. At the apex it nearly always means mitral stenosis. Those two generalisations are so simple but can be taken as correct if one remembers a few exceptions. I have spoken of the base of the heart rather than of the aortic area, because in many cases where the aorta is not dilated an aortic diastolic murmur may be heard in the central or even in the pulmonary area rather than in the aortic area itself. Pulmonary regurgitation is so rare as compared with aortic regurgitation that a diastolic murmur in the pulmonary area can be taken as an aortic regurgitation unless there are reasons for assuming the contrary. The only conditions under which a basal diastolic murmur does not mean aortic regurgitation are those which one finds in an old patient with a dilated atheromatous aorta; here one may get some functional regurgitation without valvular disease, but it is not of great practical importance because the fact that there is some regurgitation is the clinical fact to be dealt with, but it may influence the diagnosis. Such a condition will be found only on elderly atheromatous people or occasionally in those who have a large aneurysm. Sometimes with a very severe anæmia a diastolic murmur may be found as well as a systolic one, but it would need to be a severe anæmia before that explanation is accepted. The third thing is pulmonary regurgitation, and I think the simplest statement I can make there is that diagnosis should never be made unless it is known that the patient has pulmonary stenosis when he may have infective endocarditis on the top of that, or unless one has already made a diagnosis of severe rheumatic heart with mitral stenosis (and in many cases with aortic regurgitation as well.) The pulmonary valve is not affected by rheumatism unless one or probably both these valves have been affected as well.

Another point to remember is the possibility of congenital heart disease, and a diastolic murmur is heard at the base of the heart in patent ductus arteriosus. It will be systolic also, and it is a long and rasping murmur that should not give rise to difficulty. You are accustomed to think of many other points in the diagnosis of aortic incompetence, such as the water hammer pulse and capillary pulsation and so on; these are not methods of diagnosing aortic incompetence, but they are additional points to enable one to decide how free the regurgitation is when the diagnosis

has once been made. The diastolic murmur is sufficient for diagnosis by itself.

Mitral Stenosis.—Mitral diastolic murmurs are nearly as straightforward, but there are two complicating points. The first is that they are not always blowing murmurs such as are heard at the base. The presystolic murmur of mitral stenosis should be crescendo, and it must be remembered that the presystolic is only one variety of the diastolic murmur and has just the same significance. The second difficulty is that, if there is a loud aortic diastolic murmur, it may be conducted to the apex and imitate all the signs of mitral stenosis when mitral stenosis is not present. It is, therefore, necessary to consider carefully what other evidence there is of mitral stenosis, and in a case of free aortic regurgitation the diagnosis of mitral stenosis does not depend on what is heard at the apex but on the confirmatory sign that the heart is enlarged to the right. This is important for you to know, though it does not affect treatment and prognosis; this will depend on the symptoms and size of the heart in the presence of valvular disease. Congenital heart disease will not complicate the question of diastolic murmurs at the apex.

Mitral Systolic Murmurs.—I am leaving the question of thrills until I discuss systolic murmurs, and that is the point I would like to take next. I am reversing the order and taking the apex first, because systolic murmurs at the apex are much more important than basal ones, and also in many ways more difficult. Some years ago a systolic murmur was always regarded as evidence of organic disease and as sufficient ground for making a diagnosis of mitral regurgitation, and when I was medical registrar and looked through the older reports of the hospital, mitral regurgitation was about the commonest diagnosis in the annual index. That is far from being the case now, and some people speak of pure mitral regurgitation alone as quite a rare condition. At the same time, mainly under Mackenzie's teaching, it has been emphasised how important the heart function is and that systolic murmurs do not matter. I think the teaching has swung rather too far, and there is a danger of neglecting systolic murmurs instead of paying too much attention to them as a previous generation did.

The points to which you should pay special attention in deciding how much weight to attach to a systolic murmur are its constancy in different positions with the patient lying and sitting, its constancy in different phases of respiration, whether it can always be heard, how far it is conducted, and—I add this with more hesitation—how loud and rough it is. The loud rough murmur is more likely to be due to organic disease, but it is not certain. As regards position the patient must always be examined sitting up, because a murmur that disappears entirely when the patient lies down or stands up clearly cannot be due to something inside the heart, and must be produced in some way outside by the relationship of the heart to the lungs. A systolic murmur that is heard loudly at the end of expiration and is not heard during inspiration must equally be due to some change in the relation between heart and lungs rather than to organic heart disease. A murmur that is conducted an inch from the apex beat towards the axilla is suspicious but not decisive. A systolic murmur that is conducted well from the apex right into the axilla or even round to the back always indicates organic heart disease.

I wish I could lay down definite rules for you about these systolic murmurs that vary with position and respiration, but that is one of the subjects on which I feel much less ready to be dogmatic now than fifteen years ago. Some subjects get much easier with experience, so that I find it difficult to be with a patient for five minutes without knowing whether he has or has not angina, unless there is some very unusual feature about the case; but I find it quite possible to spend an hour with a patient with a systolic murmur, using electrocardiograms and X-rays, etc., and still sometimes have difficulty in deciding just how much importance to attach to it.

I would like to stress one very valuable point: whenever you examine a heart or whenever you have an opportunity of seeing a patient you are likely to see again you should listen to the heart with the patient in the lying and the sitting positions, notice whether there is a systolic murmur of this variable type, and make a note of it. A year later you may see that patient with rheumatic fever or pneumonia, and if then his systolic murmur is just the same as when he was in good health you have helped yourself greatly to assess its significance. On the other hand, if you had not known that he had a systolic murmur previously it would be difficult to say that it was not an organic change as a result of his infection.

If change of position or breathing will abolish a murmur entirely it can be said that it is functional; if this has very little effect it can be said to be due to organic disease. The point that is difficult is when these changes make some modification in the systolic murmur but do not abolish it entirely. Then one must bring in every other point in the story before making the final decision as to what significance to attach to that murmur.

Apical murmurs always point to the mitral valve, again with one exception, congenital heart

disease. One of the commonest congenital conditions is patency in the septum ventriculorum. If the opening is large the blood will mix so freely between the two sides of the heart that there will be no murmur, but in most cases where there are not severe symptoms the opening will be relatively small, and there will be a typical harsh systolic murmur that is well conducted. One can separate these systolic murmurs from mitral ones by the fact that they are loudest near the mid-line and conducted outwards from there.

Tricuspid murmurs will always give the same timing as mitral ones and will tend to be better heard on the right side than at the apex. The thing that makes tricuspid disease most simple is that it never recurs without other valvular disease. If it was an equal chance whether rheumatic endocarditis affected the mitral or the tricuspid valve, and both were equally common, it would sometimes be difficult to decide which the patient had. But the tricuspid valve is never affected unless the mitral has been as well, and generally the aortic also, and therefore it is a complication added to mitral stenosis rather than a disease on its own account. It may be suspected because the murmurs, either systolic or diastolic, are noticed out to the right and conducted to the right. One unmistakeable sign of tricuspid regurgitation is a pulsating liver, and that should be looked for in all doubtful cases of this type.

Basal Systolic Murmurs and Thrills.—Systolic murmurs at the base of the heart are the most difficult group of all because a large number of them are functional. The two main conditions they may mean are aortic stenosis or pulmonary stenosis. If they are very rough and localised in the pulmonary area you should search most carefully for a thrill after exercise and, in most cases, this will be found. One can then diagnose pulmonary stenosis : most often there will be other signs of congenital heart disease, such as cyanosis. Occasionally, if there is thought to be good evidence, pulmonary stenosis must be diagnosed without the thrill, but in such cases it generally means complete examination with X-rays and so on to get all the complementary evidence.

Aortic stenosis has gone through the same stages as mitral regurgitation, of being diagnosed far too frequently some years ago and now of not being diagnosed sufficiently often. The gross case in which the aortic systolic thrill is felt by everybody who comes near the patient is relatively uncommon, but milder degrees of aortic stenosis are quite common, and you must get into the way of searching for an aortic thrill in every case where you hear a basal systolic murmur. The proper way to do that is to have the patient sitting up, leaning a little forward, and holding the breath at the end of expiration. One should test first with the hand lightly on the chest and then firmly ; some thrills are better felt with very light pressure and others with firm pressure. Aortic stenosis without aortic incompetence is uncommon ; some people have said it should never be diagnosed except by experts, so that if you feel inclined to make that diagnosis you must be doubly certain of your ground. But, associated with aortic incompetence, especially in rheumatic cases, it is very common.

Other Thrills.—One other point about basal thrills. Diastolic thrills at the base are rare. Syphilitic aortic regurgitation will sometimes give a thrill, but nearly all basal thrills are systolic—again one may except patent ductus arteriosus where the thrill usually goes all through systole and diastole as well. The most important thrill at the apex is the presystolic one. It is commoner than other diastolic ones, but both diastolic and rough systolic murmurs may be associated with thrills at the apex. There the ideal position for finding it is to turn the patient over on the left side. The greatest importance of apical thrills lies in confirming what has been found by auscultation. They do not make a fresh diagnosis because the murmur alone at the apex has already made the diagnosis with certainty.

Changes in Heart Sounds.—So far I have spoken only about murmurs and thrills, and I would like to spend the last few minutes on heart sounds. Some years ago when my seniors said that someone had a weak heart sound I thought they had made a diagnosis of myocardial disease on the history and the patient's appearance and then they had heard what they wanted to hear. Now either I am getting in the same state or else I have learned more about heart sounds ; I think it is the latter, and that when one gets experience of a number of hearts one can make a great deal of diagnosis on the strength and intensity of the heart sounds. But that is a thing for you to study for many years. Be slow to make a diagnosis on that alone. One piece of evidence that confirms the value of that very strongly is that in some recent researches, electrocardiograms have been taken of patients with diphtheritic myocarditis at regular intervals, and at the same time the patient has been examined by an experienced physician listening carefully for changes in the first sound, and that when this was done there was close agreement between the time when the first sound weakened and when electrocardiographic changes appeared, showing that the diagnosis of myocarditis could be made on a weak first sound. In other conditions do not speak of weak heart sounds, especially in the hearing of the

patient; say that the heart sounds are difficult to hear. If he hears you say there are weak heart sounds he may go for years under the impression that he has a weak heart. It is difficult for many of us, whose ordinary observations are not treated with the great attention they deserve by our friends, to realise how much attention our patients pay to them; something that is said may be remembered for twenty years, and it may need examinations by many experts to convince him that he has not a weak heart. He will still feel that the first doctor who said he had a weak heart was a little cleverer than the others and able to find things that the others could not.

Reduplication of the second sound, especially in the pulmonary area, is quite common in mitral stenosis, and might confirm the diagnosis in a doubtful case, but it occurs in normal people and therefore it is not of very much value as a physical sign. The other type of triple rhythm in which three heart sounds are heard is where the first sound is reduplicated. This is gallop rhythm, and it is one of the most important heart signs; very few patients who have it are going to live for more than two years. Do not, therefore, mistake the reduplicated second sound in a healthy young man for gallop rhythm and take a serious view of his heart. I do not think I can help you better as to what gallop rhythm is than to ask you to listen to a horse galloping. There are the different sounds of galloping and canterir g, but they both have the same significance as regards the heart. I am surprised that I am not able to demonstrate striking gallop rhythm to my clerks at Guy's more frequently and how common it is at the Heart Hospital, where one sees a lot of older heart cases collected together. It is rare to have an out-patient clinic when there are not new cases showing gallop rhythm apart from old ones, and it is such an important physical sign that I want you to take every opportunity of listening to it when you get the opportunity.

Sector News

Guy's Letter

C. F. H., I regret to say, has, anyhow for the time being, given up the authorship of the Guy's Letter. We hope that his emaculate style will not be lost indefinitely to your columns, and the suggestion that his manifold activities must furnish him with ample material for a peripatetic column has been received with no little enthusiasm. The rumour that he was about to take over the Orpington letter was met with grave concern, until we were informed that he is to continue to spend the occasional night and the odd hour in the odd day with his Guy's colleagues.

Christmas having passed we have begun to see a little life up here. A Nurses' Dance, although starting as usual nearly an hour late was thoroughly enjoyed, and the expected people were seen to be doing the expected things. Even the examination celebrants managed to hit the floor, although, it must be admitted, at least two did so in the horizontal rather than the vertical.

Mr. Eason has been to tell us about Guy's in his day and before it. It was naturally well attended. Three items were outstanding. One was the remarkable longevity of the average Guy's matron. Another was the immense quantity of work done by Guy's nurses in those days; and the last was that even if the conditions at Guy's in Mr. Eason's day do seem prehistoric, at least we know them not to be so from the fact that he himself is obviously still full of youth and good humour.

The Dressers' Dinner, given to the mainstay of Guy's surgery and a few lucky associates, was a great success. The solid to liquid ratio was remarkably and commendably high.

H. A. R.

Farnborough Letter

ALTHOUGH this is our first letter to be written since Christmas, any circumstantial account of the festivities would be almost an anachronism; suffice it to say that, for those who had to stay around the Hospital, there was plenty going on, plenty to eat and drink, ample mistletoe, and no excuse whatever for not having a good time. Particular thanks are due to Sister Marson for organising the very successful gathering in Bromley on Christmas Day; to Sister Perkins for the party at Bassett's; and to Sister Waters for the most excellent fare provided at the various banquets in the Central Hall. The spirit of revelry, once aroused, carried on into the New Year, the advent of which was celebrated with a Fancy Dress Dance. A R.A.F. band played and much ingenuity was displayed in the devising of costumes; we have all grown used, in these days, to seeing women in trousers, but Mr. Williams, on this occasion, achieved the distinction of scoring a *contre-coup* by wearing a creation in black crepe-de-Chine to such good effect that he carried off the prize for allure.

Like the rest of the Sector we have been enduring a spell of very cold weather; there has been some skating on the nearby ponds, and even

the hardiest, except for the mental patients, have taken to wearing overcoats during their perambulations through the wide open spaces of the Hospital. We feel every sympathy for our colleague whose sense of caution was so numbed that he accepted a kindly offer of a hot drink in the Nursery; we trust that his gastro-intestinal symptoms will have now cleared up.

Lest it be thought that life here is all frivolity we would add that the admission-rate of cases is as high as ever; the Maternity Department still overflows into the reception-ward and skin cases are now invading the surgical wards; even a bathroom has been pressed into service as a side-ward.

V. C.

Reviews

Essentials for Final Examinations in Medicine. By JOHN DE SWIFT, M.D., M.R.C.P. First edition. Pp. 168. London: J. and A. Churchill, Ltd. 1941. *Price 7s. 6d. net.*

THIS little book has been written with the intention to provide students with a means of crystallising and summarising their knowledge in medicine. It is arranged in encyclopædic form and contains a selection of all the systems and their diseases summarising ætiology, symptomatology, diagnosis and treatment. The forms of treatment are up to date and doses of drugs are given. New methods of treatment, such as administration of ephedrine, potassium and prostigmine in myasthenia and glycine and vitamin E in pseudohypertrophic muscular dystrophy are mentioned. The book is clear and can be recommended.

H. H. K.

Sport

Rugby

GUY'S *v.* ST. MARY'S.

(*Played at Teddington on November 15th.*)

THIS fixture was considered one of the high spots of the season, and, as both teams had put up some excellent performances, it was generally expected that a close game would result. Certain sections of the Press had made headlines that three of St. Mary's star players would be absent, but against this Strathie received a nasty leg injury in the first few minutes, which severely handicapped him for the rest of the game.

Guy's played Lillywhite at fly-half and Strathie at right centre which promised to be a wise move. The game was played in a grand sporting spirit, and Major Sanderson deserves a word of praise for the efficient manner in which he controlled it.

Both sets of backs indulged in some fine bouts of passing, but the tackling, especially the forwards, was so prompt and deadly, that it seemed almost impossible for either side to score.

The whole of Guy's pack responded magnificently; they had slightly the better of the set scrums, were most lively in the loose; but Mary's had the advantage in the line-outs.

Territorily no side could claim any advantage; play ranged from end to end by sound forward rushes and frequent three-quarter movements, some of which were accomplished with passing at lightning speed, most of the movements fizzling out on the wings, where the respective opponents cancelled out each other. A feature of Lillywhite's game was his excellent kicking to touch both in attack and defence, but in the open he was constantly being harassed by McGurk, Mary's back-row forward.

There was practically nothing between the sides in the first half; both attacked in turn. Camp came close to scoring when he made a run on the wing only to be tackled a few yards from the line. From the resultan scrum Mary's were penalised, but Mullins just missed the far upright with the kick. After twenty-five minutes Lillywhite sent Strathie away for Camp to take the final pass, and although hampered by two opponents, slipped through for an unconverted try in a reasonable position.

Following the interval Mary's backs looked dangerous with some rapid movements, but Guy's tackled vigorously. Twining was tackled as he attempted to break through, but from the loose ball some quick passing enabled Campbell to bring the scores level, but Peart failed to convert.

Guy's attacked strongly, and Lillywhite, Strathie and Brangwin combined in two very nice movements, which ended with Gartrell being tackled on the line. Mary's returned to Guy's half, and following much pressure, Venneker crossed for an unconverted try to give them the lead. They nearly scored again as McGurk went went over the line, but in the *melée* the flag went over, and as there was a doubt, Guy's had the benefit and a "touch-in-goal" was given.

Some open mid-field play followed, and Guy's enthralled the crowd by keeping up a hot attack. Gartrell was thrown into touch when almost over, and Lewis came up to take a pass from Brangwin, but his pass out went over the touch line. Not to be denied, Lewis came into another movement and, taking a pass from Strathie, took steady aim and dropped a beautiful goal. Hectic play followed until no-side was called, with Guy's victors of a delightfully refreshing game by a single point.

Score: Guy's, 1 drop goal, 1 try (7 points); St. Mary's 2 tries (6 points).

Team.—T. L. T. Lewis; R. F. Camp, D. M. Strathie, P. L. Brangwin, P. C. Gartrell; W. H. Lillywhite, N. I. Scott, B. H. Wilshere, R. M. Sharpe, A. B. Lee, A. G. Albers, J. Breen-Turner, G. F. Swann, T. W. Renton, M. R. Mullins (captain).

Hospital Information, etc.

Pass List

CONJOINT BOARD.

FINAL EXAMINATION.

January, 1942.

Pathology.

V. Y. Bockner
H. A. Buck
H. W. Bunn
E. G. Cook
A. H. Druitt
D. Gill
W. J. B. Hett
R. B. Illing
J. A. Irwin
E. O. W. Jones
S. Mandel
H. F. Osmond
W. H. Petty
A. L. Ribeiro
M. N. Teubes
D. A. White
M. Wilks

Midwifery.

J. F. R. Bentley
H. A. Buck
P. L. Cardew
E. G. Cook
D. P. Davis
A. H. Drewitt
P. W. Edward
J. D. Everall
G. R. W. L. Luntz
A. M. McCall
H. P. Merrick
J. R. P. Murley
E. C. Poulton
A. L. Ribeiro
L. Sagorin
J. W. Stephens
*F. G. Stoddart
G. F. Swann
E. J. Tucker
I. R. Waters
D. A. White
L. P. J. Wright

Medicine.

*S. H. Bockner
H. W. Bunn
*P. B. Counsell
*D. G. Dixon
R. A. H. Dubery
P. W. Edward
*P. R. C. Evans
*J. T. M. C. Jenkins
*D. H. King
*B. Kustow
*G. H. T. Lloyd
*V. H. Martindale
*L. F. Miller
*A. T. Moorhouse
H. C. Mukerji
J. B. Musgrove
*D. D. Rees
*B. J. Stephens
*W. J. Stevens
*S. D. Stock
*J. Wilks

Surgery.

W. E. S. Bain
G. G. B. Blackman
H. V. Cockburn
*D. H. Crook
*W. G. Cross
C. M. Dave
G. H. Dhenin
G. W. Downes
*D. P. Finnegan
M. F. Gallop
*A. W. Gibbons
E. J. Grierson
E. O. Hohn
P. W. Hopper
*J. R. Lauder
*N. P. W. Littler
I. M. MacArthur
*P. B. Maxted
*A. T. Moorhouse
*D. S. Orr
*A. C. Parkinson
J. D. Paulett
E. C. Poulton
J. Pinching
*R. Recht
F. H. Staines
*P. E. Steele-Perkins
*B. J. Stephens
J. W. Stephens
G. E. Thomas
R. J. Walker
*T. A. Werner
M. Wilks
E. Williams
T. R. Wooldridge

*Have completed the Examination.

SOCIETY OF APOTHECARIES OF LONDON.

FINAL EXAMINATION.

December, 1941.

Midwifery.

G. E. Barnard
G. C. Kennedy

UNIVERSITY OF LONDON.

FIRST EXAMINATION FOR MEDICAL DEGREES.

December, 1941.

(*For Internal Students.*)

G. D. Banyard
S. J. Bell
D. F. V. Brunsdon
R. L. Edwards
G. B. Elphicke
E. J. F. Filose
J. L. Hardman
H. Herbert
A. L. Jeanes
K. Y. Khong
J. G. L. Knowles
J. B. Moore

(*For Internal Students.*)

The following Higher School Candidates have completed exemption from the First Medical:—

C. D. Baker
K. W. Bolt
J. Candy
S. L. O. Jackson
C. L. Joiner
L. V. Martin
M. E. N. Smith

(*For External Students.*)

A. E. Doyle
J. B. Eades
T. R. L. Finnegan
J. M. Hall
J. G. P. Hutchison
J. L. Jenman
P. Read
J. S. G. P. Stableford
M. D. Warren
R. W. Doy

Middle East Awards and Mentions

The following medical officers are included in the list of awards and mentions in recognition of distinguished services in the Middle East (including Egypt, East Africa, the Western Desert, the Sudan, Greece, Crete, Syria and Tobruk) during the period February to July, 1941.

Mentions.

Commands and Staff.

Brigadier (Temporary) J. Walker, M.C., late R.A.M.C.

R.A.M.C.

Colonel (Temporary) H. V. Leigh.

Indian Medical Service.

Captain (Temporary Major) R. Y. Taylor.

East African Medical Corps.

Colonel C. H. Marshall and Colonel A. D. J. B. Williams.

Marriages

STAFFORD-CLARK—STEWART. — On December 16th, 1941, at North Mundham Parish Church, Mundham, Sussex, Squadron-Leader David Stafford-Clark, R.A.F.V.R., to Dorothy Stewart.

Deaths

SCOTT.—On January 2nd, 1942, suddenly, Maitland Scott, M.B., B.S., of Avon House, Westcliff Road, Bournemouth, aged fifty-four.

ROBERTS.—On January 15th, 1942, at St. Anthony's Cottage, Totland, Isle of Wight, Reginald John Roberts, M.A., M.B., B.Ch., late of Ventnor, in his eighty-first year.

EDS. { N.A.N. B.S.L.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *7th February* 1942 — *Number* 1397

PASSIM

IT is disturbing to reflect that after two and a half years of war, there should still be ground for a controversy concerning the use or misuse of medical man power to flare into prominence in the daily Press. It is true that the more vocal in this respect are but a small minority of the profession who, maybe, judge themselves or, possibly, actually are not being used to their full capabilities or else are being grossly overworked, but the fact remains that many doctors believe still that a better redistribution could do much to relieve the apparent acute shortage of medical man power. This is not simply a matter of rushing all young doctors into uniform after their six months of house appointments; nor can it be solved simply, as has been suggested, by putting all doctors of military age into a universal medical service, for distribution where and as required. Such a service would require a complex organisation to co-ordinate the distribution; there is no real reason to suppose that this would function more effectively than the present Central Medical Committee with its close contact with the Services and with the Emergency Medical Service and with local Committees throughout the country; this committee would appear to have ample powers to distribute all young doctors according as it is advised as to prevailing service and civilian needs. Although it is possible that the present machinery could be used to better advantage than it is at present, the real difficulty still seems to be faulty distribution and misuse of the available man power in the actual Services themselves; to some extent this could be remedied by substitution of clerical staff for many of the non-medical duties that doctors are called upon to perform; for the rest, it is a matter so closely related to strategy as to merit better discussion in the House of Commons than here.

RECENTLY the Hospital received some unusual and unexpected publicity in one of the evening papers. A reporter, in his search for news, discovered our Mr. Burgess, of the Works Department. We are all familiar with Mr. Burgess's achievements during those fateful nights of last winter, and we have often listened to him when he talked about his "hobby" of observing bombs. Mr. Burgess has always shown himself particular about accuracy, and we cannot believe that he really told the reporter all that was printed, particularly where his pet subject, "things dropping from the sky," was concerned.

We also know what great responsibility was carried by our Deputy Superintendent, and we welcome that the public should have been reminded in this passage of the great difficulties with which hospitals were confronted during the raids and how much the safety of the patients was in the minds of those in authority.

UNFORTUNATELY, the *Gazette* is losing the services of the Assistant Editor; Dr. B. S. Leibel, who filled this office for more than eighteen months, has decided to return home in order to join the Canadian Forces. We wish him a safe journey and a successful future. The *Gazette* will long remember his valuable help, often under very trying circumstances, and will be particularly grateful to him for the part he played in the salvage of its records during the fire in the East Wing. So far nobody has been appointed to succeed him. The task of finding a successor may prove a difficult one in view of the scattering of the Staff all over the Sector and the frequent changing of House Officers.

THE need for a representative committee of students at Guy's Hospital has recently been stressed by the proposals, put forward at a meeting last week of student representatives of eleven London hospitals, to form a new association of British Medical Schools, unconnected with any student organisation now in existence. Moreover, the Medical Planning Commission of the British Medical Association has asked for student opinion, in the form of a memorandum, upon the reform of Medical Education. It is hoped that the activities to promote such a committee at Guy's will meet with the co-operation of students who have long felt the need for such a body to express their views.

Tumours and Swellings on the Jaws

By Nils L. Eckhoff, M.S.

A PATIENT with a swelling in the region of the upper or lower jaw may be suffering from one of a variety of conditions. No doubt the commonest is a simple alveolar abscess, which is usually quickly relieved by the extraction of a tooth, although some dental surgeons believe in avoiding extraction during the acute phase and attempt to get drainage by more devious methods.

Some cases of alveolar infection proceed to osteomyelitis, in which case the swelling is apt to remain for weeks or months. Why some cases develop osteomyelitis and others do not is a bit of a mystery, but I do not wish to discuss this to-day.

Inflammation about a buried root may produce a swelling, and quite frequently a sinus below the jaw. In fact, in my experience, it is the commonest cause of a chronic sinus attached to the jaw. In the search for such a buried root it is as well to take an occlusal X-ray picture in addition to the ordinary lateral view. Only recently the presence of a root was missed for some months by neglecting to do this. Similarly a sequestrum in the jaw may be a cause of chronic swelling and sinus formation.

The man whose X-rays I show you had his teeth extracted twenty years ago. Eight weeks ago he developed a swelling in the left lower molar region. Three weeks ago he was admitted to hospital with an acute inflammation of the face resembling a carbuncle. This has now settled, but the jaw is still swollen. X-ray shows a sequestrum in the middle of the mandible, which I have no doubt is the cause of his symptoms, and I propose to remove. You will note the value of the occlusal view in determining the limits of the sequestrum.

I should also mention actinomycosis of the jaw, but this, strangely enough, does not usually cause much inflammation of the jaw itself, but rather a sinus in the neck with induration spreading from the bone.

If inflammation is excluded it is necessary to cast one's mind to tumours and swellings arising—(i) from the tooth follicle, (ii) from the gum, (iii) from the jaw, or (iv) from the tissues in the immediate neighbourhood of the jaw.

SWELLINGS OF THE TOOTH FOLLICLE

When I was a student I was taught that there were three types of swelling arising in relation to the tooth follicle—namely, dental cyst, dentigerous cyst (or follicular odontome), and multilocular cystic disease (or epithelial odontome). Since that time the British Dental Association have accepted a classification that it is as well to follow, in which the three conditions mentioned above are all classed as epithelial odontomes. To understand the rationale of this it is necesary to reflect for a moment upon the development of a tooth.

A ridge of epithelium from the mouth cavity grows down into the mesoderm of the developing jaw, and splits to form a cap over the mesodermal dental papilla which arises at the site of each tooth. The epithelial cap is the enamel organ, and its deeper cells, the enameloblasts, form the enamel, while the dentine and cementum are derived from the mesodermal papilla. The dental sac is a fibrous membrane surrounding the enamel organ and the papilla, while the whole structure is called a tooth follicle. The epithelial connection with the mouth cavity should disappear, but remnants remain, called by Malassez paradental epithelial debris.

With this outline of the development of a tooth in mind it is easier to comprehend the following classification :—

Epithelial odontomes (of ectoderm)—
- Dental cyst.
- Dentigerous cyst.
- Multilocular cyst or adamantinoma.

Composite odontomes (of ectoderm and mesoderm)—
- Complex—tooth structure plus bone.
- Compound—many tooth elements.
- Geminated—fusion of teeth with malformation.
- Gestant—one tooth within another.
- Dilated—dilated part of dental papilla.
- Enamel nodules.

Connective tissue odontomes (of mesoderm).
- Cementomes.
- Fibrous odontomes.

I do not propose to take up your time with the composite or connective tissue odontomes—except to show you some X-ray pictures of these—for they are rare, and while they may cross the path of a surgeon, they are mainly of dental interest and are dealt with by the dental surgeon. These tumours are not malignant and, if removed, should not recur. But the epithelial odontomes require further study.

Epithelial Odontomes.

A dental cyst is a swelling arising in relation to the apex of a tooth, and may occur in any part of the dental arch of the upper or lower jaw. I have

seen small ones at the apex of a tooth at extraction, but the largest may produce swellings of considerable size.

I am able to show you X-ray pictures of some of these. In the lower jaw they tend to expand the jaw on buccal and lingual aspects, causing absorption of bone centrally with redeposition peripherally. When arising in the molar region absorption and expansion may spread into the ramus.

Cysts arising in the incisor region of the maxilla may be present in the buccal sulcus and in the roof of the mouth, whilst those arising in the canine region cause a swelling at the side of the ala of the nose, and those in the premolar region bulge into the antrum and finally simulate a tumour of the antrum. In all large cysts the outer covering of bone may be so thin as to present egg-shell crackling, or may be entirely destroyed when fluctuation is easily elicited.

The treatment is to remove the offending tooth. In small cysts the whole lining should also be removed, while in large cysts it is wiser to remove the roof only, saucerise the cavity, pack it and allow regeneration from such epithelial cells as remain on the floor.

A dentigerous cyst is one developing around an unerupted tooth. In the X-ray picture an unerupted and deformed tooth can be seen inside the cyst. The treatment is to lay the cyst open, extract the tooth, pack the cavity and allow it to fill up from the bottom.

A multilocular cyst is a most interesting tumour and is frequently referred to as an adamantinoma. (It used to be called fibrocystic disease of the jaw, but as it has no relation to osteitis fibrosa cystica this name has been abandoned.) The tumour grows very, very slowly, and it is not uncommon for a patient to arrive with a ten to twelve years' history of swelling of the jaw. It is much more common in the lower than the upper jaw. A tumour of the same nature is occasionally found in the tibia or femur, whose origin it is difficult to explain.

The common clinical picture is that of a very slow expansion of the lower jaw, sometimes over a wide area. In time teeth begin to loosen and fall out, and for a while an ulcer may be present leading to a diagnosis of epithelioma. In most cases no ulceration is seen. The surface of the jaw may be smooth or nodular, owing to loculation; and egg-shell crackling may be present in some part of the swelling.

X-ray pictures give the appearance of a multilocular cyst, which is diagnostic. Biopsy reveals a basal-celled carcinoma, which, like similar tumours elsewhere in the body, is locally malignant and will recur if not completely extirpated. After repeated recurrences, more malignant characteristics may be seen in the tumour. For this reason a limited curettage operation is unsatisfactory. Complete removal is indicated which may require excision of a part of the jaw, and the defect can, if necessary, be filled with a bone graft.

Fig. 1

Microscopically the tumour tends to resemble the enamel organ with an outer layer of columnar cells like the enameloblasts, and central cells called "star cells" with foamy cytoplasm and cytoplasmic bridges. In other cases sheets of epidermoid cells are found, whilst the tendency to degeneration gives the section an almost glandular character.

Mrs. G.— (Figs. 1 and 2.)

1930.—Developed swelling in right side of jaw.

1934—Had $\overline{7654}|$ extracted. Swelling remained.

1935.—Mr. Fry operated and removed unerupted $\overline{8}|$ in a large cystic cavity. The cyst wall was removed and the cavity cauterised.

1939.—She returned with an enormous cyst (multilocular) which had caused a pathological fracture of the jaw.

March 31st, 1939.—Operation (N.E.). It was possible to remove the cyst completely.

Microscopic examination revealed a cystic follicular squamous carcinoma (apparently malignant change in a pre-existing adamantinoma).

osteitis fibrosa which is not cystic, but cuts easily with the knife and gives a special ground-glass appearance in the radiograph. Most of these conditions are uncommon, but I am able to describe a sarcoma for you :

Fig. 2

TUMOURS OF THE GUMS

There are two commonly recognised tumours of the gum—the fibroid epulis and the myeloid epulis. The former is a small hard whitish nodule made up of fibrous tissue, while the latter is a soft fleshy vascular tumour which tends to recur readily. The probability is that these tumours arise from the periodontal membrane, which makes it essential to remove the tooth about which such a tumour arises, but recurrence is nevertheless quite likely. Some believe that the epulides arise from the bone, but in many instances the bone does not appear to be involved. Others describe granulomatous and sarcomatous epulides, but these are not true gum tumours. On the other hand, epithelioma may start there.

TUMOURS OF THE BONE.

In the *bone* itself may arise the following tumours—compact osteoma, osteoclastoma and sarcoma ; and the following conditions of uncertain pathology—leontiasis ossea, osteitis fibrosa cystica (localised or generalised), and a variety of

D. M., woman, aged eighteen. Admitted to hospital June 9th, 1941. Swelling of right lower jaw started after Easter, 1941. Since then has been rapidly increasing in size, but has produced no pain or dental symptoms. In the last few weeks swelling has appeared on the lingual aspect of the jaw. The $\overline{6}|$ was extracted as it was carious, but this had no effect on the swelling.

On examination there was considerable extra-oral swelling and swelling over both aspects of the mandible. The swelling was bony hard, and fixed absolutely to the mandible in the $\overline{8\text{–}5}|$ region. No inflammatory signs. No tenderness or alteration of the mucous membrane. No mental anæsthesia. Now starting to be painful at night but otherwise symptomless.

The photographs reveal the swelling. The X-ray pictures show new bone formation around the mandible, such as is commonly seen in sarcomata, although no actual bony spicules were seen.

EXTRAMANDIBULAR TUMOURS.

Finally we come to tumours arising in structures *in the neighbourhood*, of which the most important

are carcinoma of the cheek or floor of the mouth invading the mandible, or tumours of the antrum, gum or palate invading the maxilla. In the former, pathological fracture is to be expected and as

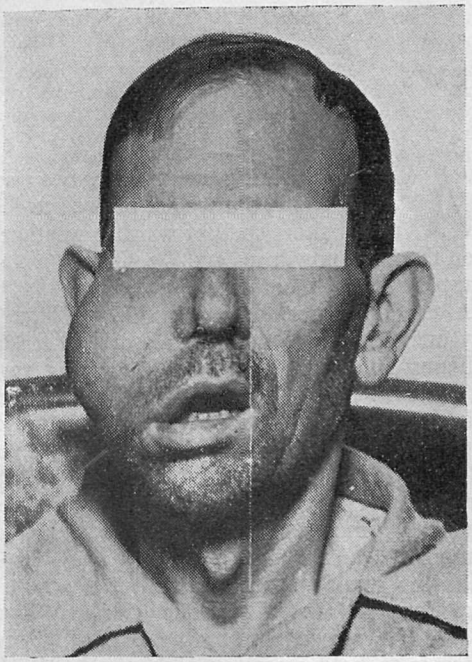


Fig. 3

radiation is unsatisfactory when carcinoma involves bone, excision is sometimes indicated. I am able to show you pictures of such a case.

Tumours of the *antrum* are especially interesting and, to un derstand them, it is necessary to realise that the mucous membrane lining the antrum is in part cuboidal or low columnar ciliated, in part transitional, whilst that over the inferior turbinate is squamous. Hence carcinomata arising in the mucous membrane may be basal-, transitional-, speroidal-, cuboidal-, or columnar-celled. Connective tissue tumours include osteoclastoma, angiosarcoma, myxosarcoma, fibrosarcoma, chondrosarcoma and the highly malignant small round-celled sarcoma.

All these tumours very soon involve the whole of the maxilla and not infrequently ulcerate into the mouth or nose later. It is particularly important to realise that an ulcer on the palate may really be an index of a carcinoma of the antrum.

As the tumour grows it will not only spread to the nose or mouth, but will also project on to the cheek and into the floor of the orbit, and into the pterygo-palatine fossa. Thus we expect to find in an advanced case ulceration in the mouth and nose leading to discharge, swelling of the cheek and displacement of the eye. The following case illustrates these points :

E. A., man, aged forty–nine. Admitted to hospital June 9th, 1941. Tooth extracted from right maxilla for pain in February, 1941. No relief of symptoms. Swelling increased in size and another tooth extracted one month later. Pain and swelling further increased, with considerable loss of weight.

On examination marked swelling of the cheek ; skin red over this, but no ulceration here. Palate displaced downwards with large ulcer here. Much discharge from right nostril. Eye not displaced. Whole swelling soft with marked expansile pulsation. No glands palpable.

X-rays shows complete destruction of lateral wall of right antrum. (Figs. 3 and 4.)

Referred to Middlesex Hospital, where he had deep X-ray, which caused the face to shrink to normal proportions. Then palatal antrostomy, biopsy and further radiation.

It used to be the custom to recommend excision of the maxilla, but this extensive and mutilating

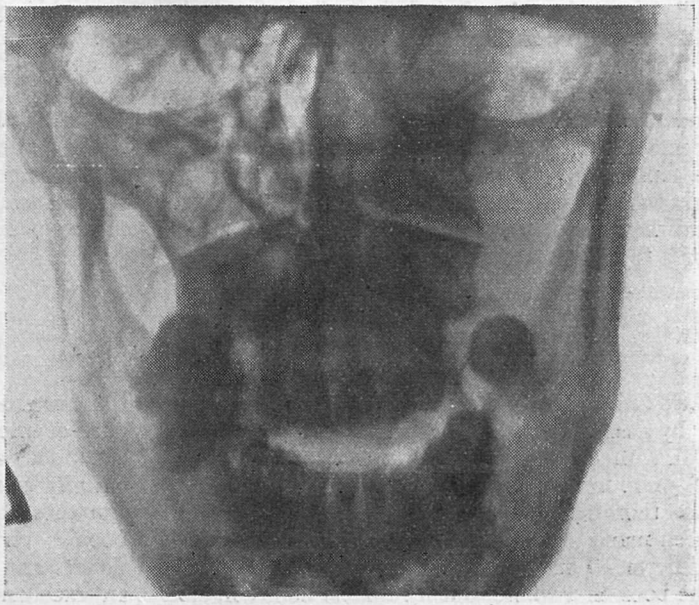


Fig. 4

operation gave poor immediate and late results. To-day most cases are treated by a combination of radiation, diathermy excision of the tumour through a palatal antrostomy, and further radiation by needling, intracavitary radiation, telerradium or deep X-rays. Some quite encouraging results have been reported.

I am indebted to Mr. Greer Walker and Mr. Thompson for many of the radiographs and illustrations.

Sector News

Orpington Letter

IT is remarkable to what lengths people will go in order to keep up with the current fashion. Hernias are the latest craze. Dr. Colbeck set the ball rolling a few weeks ago by having his hernia repaired here. With magnificent nonchalance Dr. Campbell followed his example, and at present we are happy to say that both patients are convalescing satisfactorily. The rumour that Dr. Scott is wearing a truss is hitherto unconfirmed.

We are very sorry to say good-bye to "Charlie" Watson and "Hutch," who are leaving us at the end of the appointment. We understand that Watson is taking a supply of Horlick's with him to Preston Hall, but the rumour that Hutchinson is taking a megaphone to Chichester is hitherto unconfirmed.

A singular edifice is arising next to the Superintendent's Office. Its structure is so complicated and its design so *bizarre* that it resembles a cross between a public convenience and a pillbox. Although we are told that it is built to make additional office accommodation, the rumour that it will be used to receive the overflow from the G.U. Department is hitherto unconfirmed.

The recent weather conditions have been endured by the Mess with conspicuous bravery, and a considerable amount of bad language. The spectacle of Dr. Hale-White, who, having shaved in tepid water, is about to bathe in cold water, invariably gives rise to some malicious pleasure, and the rumour that the writer has not had a bath for a fortnight is definitely untrue. P. S. C.

Pembury Letter

MUCH of the last month has been spent under snow, but we are pleased to report that a short spell of warmer weather has given the first snowdrops and Dr. Osman a chance to appear out of their winter coverings.

In the latest residential shuffle we have lost only one houseman, but we are sorry that David Vulliamy should be following his predecessor to the Wildernesse so soon. The transposition of Hale Enderby into B major, on which we congratulate him, makes a second vacancy, and we welcome Lloyd and Wilks who now join us. Albey and George McFall must also have an honourable mention on a rise in the scale to B minor.

In this week's Standing Orders we note the formation of the "Pembury Brains Trust" (should it have been Pembury "Brains" Trust?), which is to hold a session each week. We hope that the Trust will play the game and that their answers will be spontaneous. But a notice that questions must be received three days before the sitting makes us suspicious, and we propose that a guard be put on the Tunbridge Wells free library with instructions to turn away any likely Brain. In any case we wish this enterprise the success it deserves.

Next week the Hospital is to take an active part in the Pembury Warships' Week. Ping-pong and darts competitions, several dances, and a concert of local talent have been arranged, which should ensure its success.

G. L. L. R.

Reviews

Sick Children. By DONALD PATERSON. Published by Cassell & Co. 4th Edition. Pp. 610. *Price* 15*s.*

IN the new edition of this handbook upon children's diseases, the text has been thoroughly revised and every attempt has been made to make the book as comprehensive as hitherto. This has involved some enlargement of the book as a whole, but it remains handy in size. The illustrations are plentifully represented and there are many excellent plates. Although a large part of the book is necessarily in the form of expanded abstracts, each individual section is entirely complete and at the same time practical. For those taking the children's appointment, this book is very serviceable, and for medical practitioners and those taking children's diplomas it is an excellent and handy book for reference and revision.

Sport

Rugby

GUY'S *v.* METROPOLITAN POLICE.

(Played at Honor Oak Park on Saturday, November 22nd.)

AT last Guy's have been beaten, thus ending an excellent run of eight victories. Incidentally, the Police were the first to beat us last season. Guy's have themselves to blame for this defeat; they had sufficient chances in the first half and at periods during the second when a score seemed certain, but dropped passes in the centre at the crucial stage was their undoing.

Our pack more than held their own against their heavier opponents, and, indeed, "shoved" them quite often. Albers was a conspicuous figure in the line-outs, and in the loose scrums did excellent work, several times breaking through with the ball, and the Police found him difficult to hold.

Guy's did most of the pressing in the opening stages and, after a few minutes, had two scrums on the Police line, which Evans, the Police scrum-half, relieved. An almost certain try was spoilt by Sharpe giving a forward pass to Lee, but from the scrum the Police were penalised in front of the posts and Mullins kicked the goal.

The Police had a nice three-quarter movement, which ended in a knock-on, and continued to press for a while, but Guy's forwards tackled heartily. A second penalty was awarded to Guy's and once again Mullins scored. Kelly, of the Police, was well tackled by Macrae-Gibson, but two scrums on the Guy's line looked dangerous until Mullins and Swann dribbled away. Gartrell almost got over after a run, but was thrown into touch.

Following the interval, Evans and Masters opened up the game nicely for the Police backs. Masters and Kelly indulged in a bout of passing, which was followed by an epidemic of knock-ons by both sides. Guy's were hard pressed on their line, and Gardner made a fine effort to relieve, but his kick to touch was short and Smith gathered, to cross for an unconverted try, which looked suspiciously like a knock-on as he took the ball. Two minutes later the Police drew level when Kelly kicked a grand penalty goal from the touch line.

Guy's made an excursion to the Police half, and after Lillywhite had found touch by the corner flag, dropped passes prevented Guy's crossing the line. Smith, the Police winger, intercepted a wild pass by a Guy's forward on the half-way line, and ran clean through to score under the posts for Kelly to convert.

Mullins tried his utmost to set up an attack and the backs handled well until the ball reached Camp, whose cross-kick ended in a scrum. Albers broke away from a loose maul but was outnumbered, and then a forward rush took Guy's to the Police "25"; Gartrell gained possession, cross-kicked, but a scrum was given for a knock-on. It was an exciting struggle, with Guy's striving hard to save the game. Gardner was tackled swiftly before he could pass to Camp, which was followed by Jones picking up from a dropped pass and was almost through. Masters appeared to touch down for a try, but the referee ordered a drop-out. Williams intercepted another Guy's wild pass and the Police indulged in some neat interpassing which threatened danger.

In the closing stages Guy's pressed, Camp made a grand run through the centre but had no support, and Lee was collared a couple of yards from the Police line.

Score: Guy's, 2 penalty goals (6 points); Metropolitan Police, 1 goal, 1 penalty goal, 1 try (11 points).

Team.—T. L. T. Lewis; R. F. Camp, C. S. Gardner, N. K. Macrae-Gibson, P. C. Gartrell; W. H. Lillywhite, N. I. Scott; B. H. Wilshere, R. M. Sharpe, A. B. Lee, A. G. Albers, J. Breen-Turner, G. F. Swann, T. W. Renton, M. R. Mullins (captain).

GUY'S *v.* ALDERSHOT SERVICES.

(At Honor Oak Park on Saturday, November 28th.)

THE visit of Aldershot Services drew a fair-sized crowd, who were rewarded with a delightful game. Guy's forwards were the mainstay of the side, although beaten for possession in the set scrums, were very fast in the loose and gave their backs many opportunities. Strathie was missed badly, as there appears to be a lack of speed, thrust and finesse in the back division.

Guy's opened strongly and Gartrell was forced into touch early on, but Aldershot attacked from an intercepted pass, Camp doing well to tackle Miller, the Aldershot scrum-half, whose fly-half, White, followed with a touch-kick by the corner flag. Aldershot looked dangerous, but Cornish knocked on, and after Lillywhite had charged down a kick, Miller fumbled, and Wilshere kicked to touch. White made a break through and Guy's had a drop-out. Aldershot tried a drop, which was charged down by Mullins, and then Cornish was collared with a grand tackle by Macrae-Gibson.

Lewis and Gartrell handled nicely until a forward pass stopped play, and after Mullins had missed with a long-range penalty, White had another run but could not pass Mullins, and Lillywhite relieved to touch. Macrae-Gibson, Brangwin and Gartrell indulged in a bout of passing which ended on the touch line. As the ball returned from the Aldershot line Lewis attempted a drop, but a moment later, taking a pass from Wilshere, sent the ball sailing over the bar.

Guy's pressed stongly after the interval, with Mullins and Breen-Turner dribbling to compel Bradburn, Aldershot's full-back, to touch down. A nice dribble by Wilshere was followed by Lewis making two good kicks to touch.

After two minutes of the second half Mullins kicked a penalty goal from near the touch line. Aldershot had one very dangerous three-quarter movement to reach the Guy's line, but a forward rush sent them back, and Lillywhite made further ground with some good kicking.

For not playing the ball Bradburn was penalised in front of the posts, and once again Mullins was successful with the kick. Camp had a long run on the touch line following a movement by the backs, and as Aldershot carried play to midfield, Lewis came up to give a pass to Gartrell, who let fly and landed a long-distance dropped goal.

Aldershot attacked and Bradburn took a reverse pass from White, but was tackled immediately. Some excellent handling by Scott, Brangwin and Camp resulted in Breen-Turner crossing, to run round to the posts for Mullins to convert; Camp did exceedingly well to keep the ball in play when appearing to be shut in; this try was most welcome, as it appeared that all Guy's points would come from kicks.

Setting up a hot attack Aldershot were deservedly rewarded with a try by Naylor which Whitehead converted.

Score: Guy's, 1 goal, 2 dropped goals, 2 penalty goals (19 points); Aldershot Services, 1 goal (5 points).

Team.—T. L. T. Lewis, R. F. Camp, P. L. Brangwin, N. K. Macrae-Gibson, P. C. Gartrell; W. H. Lillywhite, N. I. Scott; B. H. Wilshere, A. B. Lee, J. D. Everall, J. R. C. Matthews, J. Breen-Turner, G. F. Swann, T. W. Renton, M. R. Mullins (captain).

GUY'S *v.* ST. BARTHOLOMEW'S HOSPITAL.

(At Chislehurst on Wednesday, November 26th.)

NO excuses are necessary to explain away Guy's defeat by 5 points to 3, but the general opinion after the game was that a draw would have been a fair result. Swann, Strathie and Gartrell were missing from the Guy's side, but no fault could be found with their deputies, unless we take the backs, who simply could not find those openings which lead to tries.

Let it be said that Bart.'s played an excellent all-round game ; the pace was terrific throughout, and play ranged from end to end with lightning movements. In such a keen game, with the tackling prompt and decisive, all attempts to score were completely broken.

Guy's led at the interval with a penalty goal kicked by Mullins, and this was retained until ten minutes from the end, when Bart.'s forwards carried play into Guy's "25" and forced a try which was converted. This was followed by a hectic finish. Guy's forwards, especially in the loose, worked untiringly to force the issue, but Bart.'s were determined to hold on to their lead and left no gaps in their defence. This was perhaps the fastest game Guy's have been engaged in this season.

Score : Guy's, 1 penalty goal (3 points) ; Bart.'s, 1 goal (5 points).

Team.—T. L. T. Lewis ; R. F. Camp, P. L. Brangwin, N. K. Macrae-Gibson, A. C. Macrae-Gibson ; W. H. Lillywhite, N. I. Scott ; B. H. Wilshere, R. M. Sharpe, A. B. Lee, J. R. C. Matthews, A. G. Albers, J. Breen-Turner, T. W. Renton, M. R. Mullins (captain).

GUY'S *v.* ROSSLYN PARK.

(Played at Old Deer Park on Saturday, December 6th.)

GUY'S suffered their biggest defeat of the season against a well-balanced Rosslyn Park side, who took all the chances that came their way. Our forwards were not in that same smashing form as we have seen them this seaon, but it must be said that Sharpe, Breen-Turner and Swann were missing, and Strathie was still an absentee.

After two minutes' play Huxley went over for a try, which he failed to convert. Guy's attacked with Scott prominent, and some accurate passing carried play to the Park's line. Fleming, the Park left centre, who was in excellent form throughout, made a dangerous break through to be followed by Macrae-Gibson, who also played a fine game, calling for a mark, and made a lot of ground with a kick to touch.

Some good running and handling by Brangwin and Camp found the latter in possession near the Park's line, being shut in he passed to Mullins, who went over for a try which he converted himself with an excellent kick near the touch line. Guy's continued to attack, but Bevis relieved with a nice run, Steele broke away, but a forward pass spoilt the opening. Crichton looked almost through but was well tackled by Macrae-Gibson, and then Scott got offside, but Huxley missed the kick. Gartrell brought off a hard tackle to stop Bevis, and following a run by Brangwin and Camp, the Park attacked. Bevis dodged several tackles ; he was well supported, and Harding crossed for an unconverted try.

Lee gave a pass to Gartrell who kicked to touch, but the Park's three-quarters attacked, until Albers, who played very well, passed to Brangwin and, deceiving about four opponents, cut clean through. Gartrell took the pass and forced himself over for a try, which Mullins converted with another long-range kick. Macrae-Gibson had a grand run which deserved a try, but was, unfortunately, collared inches from the line, and then the Park forwards carried play to Guy's line to be awarded a doubtful try by Brown.

The second half went strongly in favour of the Park, who were helped by Guy's feeble tackling. Bevis crossed for an unconverted try early on, and a few minutes later Harding, full of confidence, dashed through for a try, which he failed to convert.

For long periods Guy's were forced on the defensive, but made a few spirited attacks, and one excellent bout of passing by Macrae-Gibson, Brangwin, Camp, Lee and Mullins raised Guy's hopes, to be followed by Camp nearly sending Brangwin over. The Park had several bouts of passing and, during one, Guy's were hopelessly out of position, when Bevis gained possession to run in for a try, which Harding converted. Another try followed, this time by Steele, who also should have been stopped, but Guy's were showing signs of distress. Harding was almost over, Bevis made a grand run, Brangwin collared Harding, who was almost through, and then Fleming deceived everybody with a swerving run to score near the posts for Huxley to convert in the very last second.

Score : Guy's, 2 goals (10 points) ; Rosslyn Park, 2 goals, 6 tries (28 points).

Team.—T. L. T. Lewis ; R. F. Camp, P. L. Brangwin, N. K. Macrae-Gibson, P. C. Gartrell ; W. H. Lillywhite, N. I. Scott ; B. H. Wilshere, A. B. Lee, J. D. Everall, A. G. Albers, J. R. C. Matthews, D. M. Hilton, T. W. Renton, M. R. Mullins (captain).

GUY'S *v.* NEW ZEALAND R.A.F.

(Played at Honor Oak Park on Saturday, December 13th.)

THE New Zealand R.A.F. proved a great attraction and fifteen minutes after the kick-off spectators were still coming in. The New Zealanders entered the field in their traditional style in single file, and as the Guy's team faced them, the crowd were treated to a performance of the famous Maori war cry, led by Tamoana, the final leap into the air being accompanied by much applause from the stand.

The fifteen players who did duty for Guy's are to be heartily congratulated on their performance. Of the recognised first team players only five turned out. The New Zealanders thoroughly deserved their victory, but, territorily, the game was much closer than the final score indicates.

The first quarter of an hour of the first half was somewhat scrappy and neither side could make headway. New Zealand were awarded a penalty and Ellis kicked an easy goal. Then followed an interesting struggle. Guy's backs made some threatening attacks, but could not pierce a strong defence, and when the New Zealanders retaliated they were well marked. Before half-time Sutherland went over for an unconverted try under the posts.

Immediately on resuming Guy's forwards and backs had a grand movement, some accurate passing found Lillywhite in possession and A. C. Macrae-Gibson did extremely well to take the pass and force himself over for a try, which Evans converted. Everything seemed set for a Guy's win, as they exerted more pressure, but the New Zealanders settled down and gradually found gaps in Guy's defence. Sutherland had a dangerous run, cross-kicked, but a knock-on spoilt a certain try. Play became much faster. Guy's made some refreshing bursts, and were almost over following a combined movement by all the outsides.

Sutherland got away on the touch line, passed to Knight, a forward, and Sutherland, following up, took a return pass to score a delightful try which Ellis converted. Tomoana went over soon after, but lost the ball

before touching down, and Guy's had a drop out, but with determination Tomoana slipped over for a try from a scrum near the Guy's line, but Ellis was short with the kick.

Guy's fate seemed sealed, but the whole team fought stubbornly until a big gap was found by Grant, who had little difficulty in crossing for an unconverted try, which was followed by no-side. Thus ended a most enjoyable and interesting game, refereed admirably by Sqdr./Ldr. C. H. Gadney.

Score: Guy's, 1 goal (5 points); New Zealand R.A.F., 1 goal, 1 penalty goal, 4 tries (17 points).

Team.—D. A. Harris; I. D. Henderson, D. W. F. Charlton, N. K. Macrae-Gibson, A. C. Macrae-Gibson; W. H. Lillywhite (captain), N. I. Scott; B. H. Wilshere, A. B. Lee, R. G. L. Brittain, T. R. Wooldridge, J. R. C. Matthews, S. M. Hilton, G. M. Evans, G. F. Swann.

GUYS *v.* "A NAVY XV" (DEVONPORT).

(Played at Honor Oak Park on Saturday, December 20th.)

A NAVY XV, drawn from the Royal Naval Engineering College, Devonport, visited Honor Oak Park and put up an excellent exhibition. It is no exaggeration to say that Guy's appeared to be outclassed and the miracle was that when the game was abandoned fifteen minutes after the interval, only one point divided the teams.

Guy's kicked off, but the Navy attacked immediately with some neat, crisp handling. The ball reached Sub.-Lt. Simmonds, who cut through and sent Sub.-Lt. Penhaligon over for an unconverted try in the first minute.

Two movements by the Navy were spoilt by offside, and then A. C. Macrae-Gibson kicked nicely to touch when tackled. Sub.-Lt. Simmonds was almost through again, but Lillywhite collared him just in time. The Navy backs indulged in some perfect bouts of passing with Sub.-Lt. Simmonds always prominent, and it was he who cut through neatly to register a brilliant try which he failed to convert.

Guy's were kept on the defensive and Sub.-Lt. Penhaligon had a dangerous run as he fielded a kick by Lewis. Matthews made a grand dribble to carry play to half-way; the Navy were penalised for offside and Lewis was just wide with a long drop-kick.

After the interval the Navy had matters almost all their own way, but Lewis went over for a try which Evans converted, following which no-side was called, and what promised to be a grand game was brought to an abrupt conclusion.

Score: Guy's, 1 goal (5 points); "A Navy XV" (Devonport) 2 tries (6 points).

Team.—D. A. Harris; A. C. Macrae-Gibson, T. L. T. Lewis, N. K. Macrae-Gibson, P. C. Gartrell; W. H. Lillywhite, N. I. Scott; G. M. Evans, A. B. Lee, R. G. L. Brittain, A. G. Albers, J. R. C. Matthews, S. M. Hilton, T. W. Renton, G. F. Swann.

GUY'S *v.* WASPS.

(At Honor Oak Park on Saturday, January 3rd.)

THIS was a hard game and a battle between the two packs. Wasps endeavoured to make it a forward game, but whenever they got the ball back, Grimshaw, their stand-off half, needed a lot of watching. The Guy's three-quarter line did not work as smoothly as was expected until the last twenty minutes, which was the best period from all points of view.

The game started somewhat scrappily, but Camp made a run before he was forced into touch, and both sets of forwards used their feet to advantage. Scott tried to dodge round the blind side, but was collared; Grimshaw went wide with a drop-kick; and then a nice passing movement by Gartrell and Breen-Turner was followed by Camp almost getting over from a pass by Strathie. After twenty-five minutes Grimshaw made a nice left-footed kick to drop a goal to give Wasps the lead.

Guy's pressed for a while. Swann tried to break through on the touch-line; Lee was prominent in a forward dribble; but Wasps nearly scored through Martin, who lost the ball on the line as Lewis brought off a grand tackle. Grimshaw had another attempt at a "drop" which went wide.

Following change of ends Guy's pressed, but Wasps forwards soon forced them back until Lewis relieved with a long kick to touch. Wasps' tackling was deadly as Guy's attempted to open the game; one fine movement by Lillywhite, Gartrell and Strathie was only stopped by each man being tackled in turn as the Wasps ran back to defend. Twelve minutes of the second half had passed when Camp forced himself over from a clever three-quarter movement. Hereabouts Swann went off with an injured shoulder and did not return.

Strathie intercepted a pass but Sharpe unfortunately slipped as he took the ball, and Lillywhite made a nice dribble to take Guy's into Wasps' "25." Macrae-Gibson kicked ahead over the Wasps' line, but just lost the touch-down, and the Wasps forced Guy's to defend their line for some seconds. From a scrum on the line Low, Wasps' scrum half, scored an unconverted try.

It was then we saw the real Guy's as they literally "sailed into" the opposition. Strathie broke through and passed to Gartrell, who made some ground before giving a timely pass to Camp, who touched down for a really good try. The next minute Wasps were compelled to touch down for a drop-out. The three-quarters advanced with some orthodox passing, but as the ball reached Gartrell he was forced into touch. Strathie tried a drop-kick which went wide, and after Lillywhite had found touch with a good kick, Guy's were awarded a penalty and Mullins scored an excellent goal which gave Guy's the lead.

A grand struggle followed with both sides tackling vigorously to prevent a score. Mullins saved what might have been a certain try as he tackled Rimmer; Strathie made a nice kick to touch, to be followed by a run by Camp who cross-kicked, but Wasps got the touch down for a drop-out. Towards the end Wasps were pressing on the Guy's line, but Lewis passed to Gartrell, who found touch to relieve the danger.

Score: Guy's, 2 tries, 1 penalty goal (9 points); Wasps, 1 dropped goal, 1 try (7 points).

Team.—T. L. T. Lewis; R. F. Camp, D. M. Strathie, N. K. Macrae-Gibson, P. C. Gartrell, W. H. Lillywhite, N. I. Scott; B. H. Wilshere, R. M. Sharpe, A. B. Lee, A. G. Albers, J. Breen-Turner, G. F. Swann, T. W. Renton, M. R. Mullins (captain).

Hockey

GUY'S *v.* CAMBRIDGE UNIVERSITY.

(At Broxbourne, 28th January, 1942.)

Won 3–0.

THANKS to the generous help of the Broxbourne Hockey Club and its captain, Dr. Dimock, we were able to play Cambridge on a ground, the position of which obviated the necessity for a long journey by either side.

Guy's, who had not played at all since several weeks before Christmas, were hard pressed for the first fifteen minutes, and one high shot was well saved by Rayner. The defence, however, proved itself very sound, and when at last the ball reached the Cambridge end of the

field it was Guy's who scored first, Dimock, following up a shot from a long corner, pushed the ball into the net. Two minutes later Saunders scored again with a well-placed shot from the edge of the circle.

Fast even play characterised the second half and, quite early on, Saunders increased Guy's lead to end a melée in the Cambridge circle. Later, Glover succeeded in defending the Guy's goal in a penalty bully after his feet had intercepted a hard shot that would otherwise have given the University a goal.

Thus the game ended with Guy's winning by three goals to nil, but it is only fair to say that our superiority was not as marked as the score suggests. Many Cambridge attacks were broken up by an excellent defence, Glover especially proving again what a sound back he is. It would be invidious to single out any others from a team that thoroughly deserved to win because it played well as a whole, was quicker on the ball than the University, and took every opportunity offered.

The result certainly justifies our efforts to improve the fixture-list which we hope further to strengthen next year.

Team.—D. J. Rayner; B. H. Prideaux, E. R. Glover; G. R. Dimock, G. G. Richards, P. T. Parr (captain); G. Thompson, I. D. Trethowan, J. R. Burt, D. R. Saunders, T. L. Parry.

Hospital Information, etc.

Pass List

CONJOINT BOARD.
December, 1941.

Chemistry.

J. F. Bowes
G. T. Crook
D. W. Farren
M. C. Grant
W. D. Hannaford
C. M. M. Jenkins
J. H. Phillips
J. D. Rumble
P. B. Smith
I. D. L. Thomson
J. R. Wallis

Physics.

I. L. Busbridge
G. T. Crook
C. M. M. Jenkins
F. W. R. Savard
E. J. Williams

Elementary Biology.

I. L. Busbridge
J. B. Cawston
G. T. Crook
R. L. Davies
D. W. Farren
J. F. M. Flanders
M. C. Grant
W. D. Hannaford
E. McK. Sycamore
A. J. L. Wheatley

1ST EXAMINATION.
December, 1941.

Anatomy.

N. P. Bronsdon
J. Z. Cohen
D. G. H. Davies
P. D. Harvey
H. W. Palmer
B. H. Pentney
A. D. Robinson
F. B. Sartory
P. J. Wardill

Physiology.

N. P. Bronsdon
P. D. Harvey
H. W. Palmer
B. H. Pentney
A. D. Robinson
F. B. Sartory
P. J. Wardill

Pharmacology.

A. Brown
M. J. Cutler
J. M. Fabricius
M. A. Filose
W. Fox
S. Freedman
G. H. Gilford
J. M. Hanson
R. G. Lomax
S. A. Marsh
D. R. I. Mason
P. F. Pearson
R. L. Ray
T. L. Reeves
G. F. Swann
G. R. M. Sichel
I. T. The
A. J. Walters
H. Whitworth

ROYAL COLLEGE OF SURGEONS OF ENGLAND.
L.D.S.
1ST PROFESSIONAL EXAMINATION.
December, 1941.

Dental Metallurgy.

D. A. Barr
J. R. Burt
D. J. Gray
D. J. Reid
P. B. Smith
P. S. Sutton
I. H. Hilliam
P. F. Howe
M. C. Hudson
G. R. M. Mote
A. E. Twist
P. J. R. Whyte
B. S. Wilson

Dental Mechanics.

R. C. Curties
J. E. Dyke
D. R. Edwards
J. H. Farrell
J. C. Howe
D. T. Humphris
R. E. Hyman
N. D. Miller
D. E. Williams

Anatomy and Physiology.

D. C. Dawson
J. D. Green
P. F. Howe
P. Maxwell-Stephens
G. Thompson
H. I. Tozer
M. G. Trott

Special Anatomy and Physiology.

B. M. Barker
D. F. L. Cook
A. A. Halamandres
N. A. Lee

Notices

The Index for Volume LIV (1941) is now ready for distribution and may be obtained on application to The Manager, *Gazette* Office, Guy's Hospital, London, S.E.1.

Changes of Addres

Professor G. Stead, 4, Linden Park, Tunbridge Wells. (Tel.: Tunbridge Wells 2520.)

Changes of Address of Prisoners of War

A. R. Darlow, Captain R.A.M.C., Ospedale Militare di Caserta, Napoli, Italia.

Oliver Ive, Capt. R.A.M.C. (133115), Ospedale Militare di Caserta, Napoli, Italia.

Marriages

GORDON—ALLINGHAM.—On January 24th, 1942, at Blindley Heath, Surrey, John Gordon, Flying Officer, R.A.F. (V.R.), to Mabel Anne Allingham.

Death

CARPMAEL.—On January 22nd, 1942, suddenly at Guildford, Cecil Edward Carpmael, M.B., B.S., of Dulwich Village, S.E.21.

FOTHERGILL.—On January 20th, 1942, at Queen's Road, Tunbridge Wells, Ernest Rowland Fothergill, M.B., B.S., aged seventy-eight years.

HUMPHREYS.—On January 24th, 1942, at Frog Hall, Wokingham, Berks, Francis Rowland Humphreys, M.R.C.S., L.R.C.P., aged eighty-three years.

OLVER.—On January 13th, 1942, Stephen Holloway Olver, L.D.S., R.C.S. Eng., of Devonshire Street, W.1

ED. N.A.N.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *21st February* 1942 — *Number* 1398

PASSIM

A CORRESPONDENT in last week's *British Medical Journal* deplores the fact that, with a few exceptions only, no use is made for the purpose of teaching of the valuable clinical material in London County Council hospitals. Guy's, we are glad to say, has been one of the exceptions. Before the War members of the Staff used to take their firms to St. Alfege's Hospital on frequent occasions and for three years a number of students received practical instruction in midwifery at the same hospital. When the available clinical material at Guy's almost dwindled away as the result of enemy action necessitating closure of a number of wards, routine medical rounds were started at St. Olave's Hospital, and were continued for many months.

Before the War medical Revision Demonstrations were given for students taking their Finals during the next three months. A large number of cases from a list compiled by the Preclinical Tutor were always available. Then the War dispersed these patients and the classes fell in abeyance. Some months ago, however, it was possible to start them again in various L.C.C. hospitals, whose Medical Superintendents had made their cases available for the purpose. Perhaps an even greater co-operation may be established in the future as our clinical material is by no means abundant at present.

UNDOUBTEDLY, like the majority of those who listened to Sir Stafford Cripps' recent broadcast, we were wondering the day after how we could, in our own sphere, help to improve the total war effort. That day we happened to wander through the Out-patient Hall and found to our horror that, despite of Out-patient appointments, the familiar peace-time phenomenon, the Dispensary queue was still in existance.

As a number of our patients take time off from work to attend the Out-patients department, the Hospital authorities, doctors, nurses, radiographers and dispensers alike must endeavour to cut down the time which has to be spent by the patient at the Hospital to an absolute minimum.

As a direct result of the abeyance in nocturnal enemy aerial activity over this country, the problem of health in the shelters has not been of such pressing importance during this winter as it was a year ago. Nevertheless, the absence of any major epidemics as yet during this third winter of war is a matter for congratulation to the various services which are responsible for the maintenance of the health of the nation. In this matter, above all, prophylaxis is of first importance, and constant attention is being paid to such problems as the maintenance of satisfactory standards of nutrition and the conditions of and hours of employment in factories. One essential part of these services is devoted to the attempt to promote a consciousness of health as opposed to a dread of disease amongst the population in general. The Central Council for Health Education, as noted previously in these columns, is constantly preparing new material giving well-authenticated advice to the general public on various subjects associated with healthy living; recent leaflets deal with various subjects, including diphtheria, whooping cough, droplet infection, rheumatism and infantile paralysis, whilst a variety of films are now available for hire.

THE attention of all Guy's men serving in the Forces is particularly drawn to a letter contributed by the Librarian in this issue of the *Gazette*. The labour involved in the preparation of a Roll of War Service is extremely heavy; the task can, however, be immeasurably lightened by the co-operation and response to this letter of all who are serving or who have served in His Majesty's Forces during the present hostilities. In particular, information is desired above all from those members of the Hospital who are serving in other than medical or dental capacities.

WE are pleased to congratulate Dr. C. G. Douglas, Fellow of St. John's College, Oxford, upon the recent decision of the Convocation to confer upon him the title of Professor. His work during the last thirty years, not only in the medical school at Oxford, but also at many laboratories all over the world, has made his name well known to us all, and he is still actively engaged upon work of considerable importance to the war effort.

Choice of Anæsthetic

A Clinical Lecture delivered at Guy's Hospital on 1st September, 1941, by A. D. Marston, M.R.C.S., D.A.

GENTLEMEN,—I intend first to speak about the choice of anæsthetic in an interesting case which I had a few weeks ago, and then to give a discursive account of the technique employed and of the anæsthetic agents used.

The patient was a lady, aged fifty-five, with a long history of recurrent attacks of chronic appendicitis. These had been treated by diet and rest in bed, but on this particular occasion signs of intestinal obstruction developed in the morning and steadily increased as the day progressed. I was warned by a surgeon at 9 p.m. that my services would probably be required for an anæsthetic at 11 p.m., but that he would communicate further with me later. At about 10 p.m. I was informed that the operation was fixed for 11.30 p.m. and I was asked what previous preparation I desired. From the physician I learned that the patient's general condition was poor and that she was now vomiting fæculent gastric contents. He advised against giving a spinal anæsthetic, as he thought the constant vomiting would render this a difficult matter; furthermore, the systolic blood pressure was low, and in any case the patient was much too apprehensive and nervous to co-operate in any spinal technique. On examining the patient I fully agreed with what the physician had suggested. An injection of morphia gr. 1/6 and atropine sulphate gr. 1/100, was given half an hour before the operation. Anæsthesia was induced in the patient's bedroom with 7 cc. of evipan, after which she was transferred to the theatre and placed on the operating table, which was tilted to about 30 degrees. The face-piece of a gas-and-oxygen apparatus was then applied, and five minutes were spent in securing a smooth gas-and-oxygen anæsthesia. Five cc. of vinesthene was then given plus a little carbon dioxide, the object of this being to obtain :—(1) Surgical anæsthesia; and (2) deep breathing with abduction of the vocal cords. The face-piece was then removed, and a Magill catheter was passed through the left nostril by blind intubation into the larynx and so into the trachea.

Anæsthesia was maintained by gas and oxygen, and into the open edentulous mouth a tube was introduced into the stomach. A considerable quantity of gastric content came up, and when this had ceased I washed out the stomach with warm saline solution until the return was quite clear. The tube was left *in situ* and anæsthesia was deepened by the addition of vinesthene to the gas and oxygen.

The surgeon performed a laparotomy and removed a gangrenous appendix, dealing also with an adhesion which was causing most of the trouble. At the completion of the operation the stomach was again washed out, after which I passed a Ryle's tube, leaving this in position. As the patient's condition was only moderately good, an intravenous drip was fixed up as soon as she had been returned to bed.

I had noticed that after the withdrawal of the intratracheal catheter the patient's colour was not so good as it should have been, there being slight cyanosis. I watched her for an hour, making sure that the intravenous drip was duly functioning, and as her colour was then still not satisfactory I instituted oxygen therapy. A " B. L. B " oxygen bag was fixed into position, and oxygen was administered continuously for some hours, and continued at intervals for four days. During this time the Ryle's tube was used for the injection of saline solution and for washing out the stomach from time to time as dilatation of the organ occurred. The patient made a complete recovery.

Reasons for the Employment of Evipan rather than of Pentothal.—It may be of interest to you to compare and contrast these two drugs, which are both derivatives of barbituric acid. Induction of anæsthesia is more speedy with pentothal, as is also recovery, and there is absence of the excitement which sometimes accompanies the use of evipan. Furthermore, with pentothal the rate of injection is slower than with evipan, blood pressure falls less, muscular relaxation is greater, and respiratory depression is more marked—an effect which renders the use of pentothal dangerous in debilitated patients.

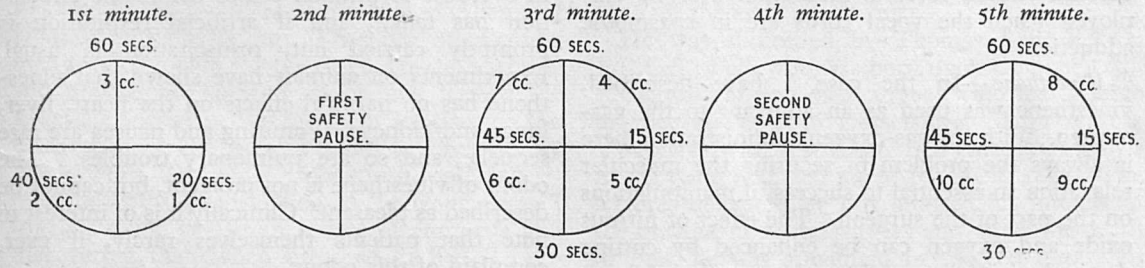
To summarise: Pentothal is the better drug for a healthy subject, but evipan is safer for the bad operative risk, and it is for this reason that evipan was chosen in preference to pentothal for the case I have just described.

While speaking of pentothal I should like to digress and make a few remarks about the way in which this drug is commonly given. This all too often consists in making an intravenous puncture, asking the patient to count and then administering the pentothal until a state of unconsciousness is reached. This is indeed a haphazard method which seldom secures the best result from the

drug, and is, moreover, definitely dangerous. The beginner should always use a watch, and during the first minute should give 1 cc. every twenty seconds, so that at the end of the first minute 3 cc. have been given. During the second minute no pentothal is given. This is a safety pause which enables the drug to diffuse throughout the system. The third minute is divided into 15-second intervals, 1 cc. being given every 15 seconds, so that by the end of the third minute 7 cc. have been introduced. But if it is thought desirable to administer still further amounts of pentothal, the fourth minute is regarded as a second safety pause, so that at the end of the fourth minute still only 7 cc. have been given. The fifth minute is again divided into 15-second intervals, during which time the remaining 3 cc. in the syringe may be given. Thus, in all, five minutes are spent in introducing the ½ gm. of pentothal.

This may seem a very slow method of administering an intravenous barbiturate, and it certainly lacks the spectacular effect of the method in common use. But its compensation lies in virtue of its—(1) safety, (2) non-interference with respiration, and (3) great muscular relaxation. There is an ample reserve of safety by this method because, as you know, the maximum dose of pentothal is 1 gm., and by the process described not more than ½ gm. is used. Experience has proved the clinical value of the safety pauses which I have mentioned.

DIAGRAM.



3 cc. given. 3 cc. given. 7 cc. given. 7 cc. given. 10 cc. given

Two English substitutes for evipan are:—(1) Sodium cyclonal (May and Baker); and (2) soluble hexobarbitone (Burroughs Wellcome).

Passage of the Magill Catheter.—Now I want to say a few words about the technique of blind intubation. This is the quickest and easiest method of intratracheal administration, but it calls for practice. These intratracheal tubes are usually 9 inches in length. The bore of the tube selected should be as wide as will pass comfortably through the nostril. Two schools of thought exist as to whether the patient should be lightly or deeply under the anæsthetic before the intubation is attempted. The expert anæsthetist rather welcomes light anæsthesia because of the increased muscular tone of the tissues traversed by the catheter; but the beginner will probably achieve more successful results by as deep a general anæsthesia as he can safely secure.

The position of the head is important. The cervical spine should be placed in ordinary carriage position—*i.e.*, without any obvious flexion or extension, while the head itself should be extended. True extension of the head has a limited range, and only takes place at the atlanto-occipital joint, which should be fully extended at the beginning of intubation. The tube should be thoroughly lubricated with paraffin, vaseline or lubefax (Burroughs Wellcome & Co.). Its passage may also be assisted by previous atomisation of the nose and larynx with 20 per cent. cocaine; but this is a practice which I personally deprecate on account of the unfortunate toxic side-chain which may occur. As you know, certain individuals are abnormally sensitive to the action of cocaine, and on more than one occasion I have experienced alarm at the sudden pallor and collapse which have occurred in such patients. In its place I use 2 per cent. percaine, which is less toxic. Only a small quantity of the percaine is needed, and this is blown into the anterior nares during inspiration. Small quantities of local anæsthetic are carried downwards through the nose and thus into the larynx, with the result that the mucous membrane of the nose is constricted, any spasm of the larynx is reduced, and the onward passage of the catheter is rendered more simple.

The actual passage of the catheter consists of three stages: (1) The tube is passed through the anterior nares along the inferior meatus of the nose; (2) it impinges against the posterior wall of the nasopharynx which directs it downwards and slightly forwards; (3) the anæsthetist should then listen to the breathing sounds before pushing the catheter gently forwards during inspiration. Thus it will pass through the glottis into the trachea. If this manœuvre fails, the tube should

be withdrawn, rotated and another attempt made. Should *this* fail, recourse must then be had to direct laryngoscopy, the tube being gently pushed through the vocal cords by Magill's forceps under direct vision.

Another aid to the successful passage of the catheter is the exhibition of carbon dioxide, which causes deep breathing with abduction of the vocal cords. One must, however, emphasise the need for extreme care and gentleness in carrying out this manœvre, as the details of a short clinical case, which I shall now describe, will illustrate.

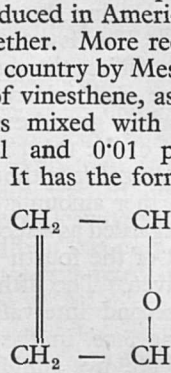
This patient was a woman, aged forty-three, who had been operated upon by a gynæcologist in the Midlands. During the course of the operation she developed laryngeal obstruction, for the relief of which intubation was performed. Within a few weeks she complained of increasing hoarseness, and finally suffered from complete loss of voice. Under direct laryngoscopy a pedunculated tumour, about half the size of a pea, was seen to be attached to the left vocal cord.

For the operation I gave avertin, followed by gas-oxygen-vinesthene through a short nasal tube, and Mr. Mollison removed the tumour without difficulty. On return to consciousness the patient's speech was perfect. Pathological examination of the tumour showed it to be a granuloma. Mr. Mollison tells me that he has now operated upon three cases of this character. As a rule, intubation is not followed by any untoward sequelæ provided care and gentleness are duly observed. On no account should forcible intubation ever be employed when the vocal cords are in spasmodic adduction.

Vinesthene.—In the case I have described, vinesthene was used as an adjuvant to the gas-oxygen. With any gas-oxygen administration there is always the problem of securing the muscular relaxation so essential to successful manipulations on the part of the surgeon. The effect of nitrous oxide and oxygen can be enhanced by cutting down the oxygen supply, either continuously or by the practice of secondary saturation. In my view, however, such a procedure is of questionable value, and particularly in the case of an old person where an ample sufficiency of oxygen should always be available to supply the needs of metabolism.

Another method of securing relaxation is by the addition of ether and/or chloroform to the gas-oxygen mixture. In the case mentioned I avoided the use of ether because the patient was already vomiting, and, as is so well known, ether tends to provoke both nausea and vomiting. Chloroform might have been used, but in these modern days we hesitate to employ such an agent upon an ill and debilitated subject. The alternatives in this particular case were cyclopropane or vinesthene, of which I chose the latter.

I will now give a short description of vinesthene. It was first introduced in America about ten years ago as di-vinyl ether. More recently it has been produced in this country by Messrs. May & Baker under the title of vinesthene, as it is called when di-vinyl ether is mixed with 3·5 per cent. of absolute alcohol and 0·01 per cent. phenyl anapthalamine. It has the formula :—



It is a volatile liquid with a boiling point of 28° C. and a specific gravity of 0·77. It is bottled by the manufacturers in an atmosphere of nitrogen, and is unstable when exposed to the air or any trace of acidity. The contents of a bottle or ampoule, once opened, should be used within twelve hours, as decomposition and polymerisation are liable to occur with the production of formaldehyde and formic acid, substances harmful to the respiratory system. The drug is a powerful one, being estimated by authorities to be some four to seven times stronger than ether, and definitely more so than chloroform. Induction and recovery are rapid, and there is a large margin of safety, because in overdose respiration ceases before the circulation has failed, and if artificial respiration is promptly carried out, resuscitation is usual. Experiments on animals have shown that vinesthene has no harmful effects on the heart, liver, lungs and kidneys. Vomiting and nausea are rare sequelæ, and so are pulmonary troubles. The odour of vinesthene is not pungent, but cannot be described as pleasant. Clinically it is of interest to note that patients themselves rarely, if ever, complain of this odour.

Method of Employment.—Various devices for adding vinesthene to the onward flow of gas and oxygen are described. There are the droppers of Goldman, Harris and Keats, and Rowbotham's chloroform bottle with micrometer screw, all of which are satisfactory. In my opinion, the best of these is the dropper designed by Keats and made by Messrs. Down Bros. This device allows vinesthene to be added in graduated doses to the onward flow of gas and oxygen. There are two possible disadvantages in connection with vinesthene—(1) its cost, and (2) its inflammability. In a closed-circuit machine, however, this latter disadvantage is not a serious consideration.

The History of Dental Teaching at Guy's Hospital from 1879-1889

A Lecture delivered in the Dental School, at the opening of the Spring Term, 1942, by F. N. Doubleday, M.R.C.S., L.R.C.P., L.D.S.

THE systematic lectures in dental surgery began in the Spring Term of 1799 and have been given continuously ever since. The first teacher appointed to deliver them was Joseph Fox, M.R.C.S. He was himself the son of a dentist who died when he was young. He tells us that he owed his education and his start in practice to the friendship and generosity of Henry Cline, Sen., who was a surgeon to St. Thomas Hospital, when it occupied its original site, opposite to Guy's. Cline was a Londoner, educated at Merchant Taylors and at St. Thomas's. As a young man he attended the first course of lectures given by John Hunter at Great Windmill Street before his appointment to St. George's. The influence of this teaching was transmitted to Fox and comes out clearly in the latter's books. Another pupil at this time was Astley Cooper, who originally entered at Guy's, but owing to his boisterous conduct as a youth was transferred for a time to St. Thomas's. Yet another was William Allen, the Quaker, who became Pharmacist to the Hospital and who also lectured upon chemistry both at Guy's and at the Royal Institution; he was one of the founders of the firm of Allen and Hanbury in Plough Court. These and other young men formed a club for the discussion of scientific and philosophic subjects which was termed the Askesian Society. We see them anticipating the discoveries of the present Nuffield Professor of Anæsthetics, Dr. R. R. Macintosh, and experimenting with the formation of "nitrous aziote" (nitrous oxide gas) from nitrate of ammonia and discovering that, when breathed, it had "a remarkably inebriating effect." They also attended the meetings of Guy's Physical Society. On January 9th, 1802, we find Joseph Fox entertaining Dr. Jenner, Astley Cooper and Allen at his house before a meeting at which Jenner read a paper upon "Cowpox." The lectures which Joseph Fox gave at Guy's were first published in 1803; subsequent editions appeared in 1814 and 1833. Their plan follows that of John Hunter's celebrated lectures on "The Natural History and Diseases of the Human Teeth," which were published in 1778. The opening chapters deal with the anatomy of the teeth and jaws; those parts which describe development well repay study at the present time. The interest which Fox took in the education of children has its counterpart in the care which he took of their developing jaws. He was the originator of the practice of removing premolars to relieve overcrowding in the canine region. He also originated the practice of moving the teeth of children by means of ligatures attached to a fixed arch. During the later years of his life Fox, with Allen, took great interest in the education of poor children and founded the British and Foreign Schools Society. It is interesting to note that Mr. Whitbread, an ancestor of our late Treasurer, and members of the Barclay family, the forebears of one of the present Governors, took part in these educational committees. This work brought Fox and Allen into personal relationship with two sons of George III, the Dukes of Kent and of Sussex. Both of them were patients of Fox and when the Duke of Kent, the father of Queen Victoria, got his own financial affairs into confusion, he asked Allen and Fox to take charge of them and they extricated him from his difficulties. Worn out by the many professional and social activities in which he was engaged Fox died on April 17th, 1816, at the early age of forty.

He was succeeded by Thomas Bell, F.R.S., F.R.C.S. Bell, who was born upon October 11th, 1792, was the son of a surgeon who had a large practice at Poole, in Dorsetshire. After serving a pupilage with his father, Bell entered at Guy's in 1813 and obtained his M.R.C.S. in 1815. The lectures delivered by Fox aroused his interest in the practice of dental surgery and, upon the death of Fox, he was appointed to succeed him. In 1829 he published a text-book, entitled "The Anatomy, Physiology and Diseases of the Teeth," a second edition was published in 1835. As would be expected from his general record, Bell was a careful observer. He attended post-mortem examinations to observe what changes took place in the teeth of persons who had been hanged or drowned; this was to determine the character of their blood supply. The process of filing for the treatment of dental caries is delightfully described in the letters of Jane Austen. Bell notes that as long as filing is confined to the enamel no pain whatever is produced, but that the instant the file begins to act upon the bone (*i.e.*, dentine) the sensation is exceedingly acute. This is an accurate observation

upon a problem which is still discussed. It was an old practice of dentistry, continued long after Bell's time, to cut off the crowns of very carious teeth, leaving the roots in the alveolar process; of this Bell writes in a trenchant manner which seems entirely modern: "It may perhaps be regarded as scarcely necessary to advert now to a practice which was sometime since revived in this country, with the promise of success which would put even empirical boldness to the blush: I mean the excision, as it is called, or the cutting off of decayed teeth. It is an operation irrational in its principle, often useless in its immediate effects, and in its consequences most pernicious." Bell carried on a busy dental practice in what was then a principal centre for consultants, Finsbury Square. He not only lectured upon dental surgery, but was also appointed to deliver lectures upon comparative anatomy at Guy's. This latter subject in time became his chief interest, and in 1836 he was appointed Professor of Zoology at King's College, in the University of London. He had been elected a Fellow of the Royal Society as early as 1828; in 1848 he was elected as its Secretary. In 1853 his election as President of the Linnæan Society took place, and in that capacity he occupied the chair when Wallace read his own observations and those of Charles Darwin upon the "Origin of Species." Bell also wrote text-books upon "The History of British Quadrupeds," and "The History of British Reptiles." In 1845 Sir Richard Owen dedicated his great text-book on "Odontology" to him. He was also the senior dental member of the first Board of Examiners, appointed by the Royal College of Surgeons, when the L.D.S. was instituted in 1860. Another member of this Board was J. H. Green, who had been a Demonstrator of Anatomy at Guy's, and a friend of John Keats, in 1815–16. In later life Bell purchased Gilbert White's house, "The Wakes," at Selborne, and while living here edited an edition, in two volumes, of Gilbert White's "Natural History of Selborne," which was published in 1877. He died at 1880 at the age of eighty-eight.

S. J. A. Salter, F.R.S., M.B. (Lond)., M.R.C.S., L.S.A., also came from a Poole family and was educated at King's College Hospital. He was a nephew of Thomas Bell, and although he began to practise general medicine, he soon gave it up and specialised in dentistry, following his uncle both in practice and in his lectureship at Guy's in 1851. His papers upon comparative anatomy and upon botanical subjects secured his election as a Fellow of the Royal Society in 1863. In 1874 he published his hospital lectures in a text-book, "Dental Pathology and Surgery." This book has a truly scientific outlook. In it certain odontomes, enamel nodules and various types of cyst are described for the first time; he was the first to distinguish between true and false gemination in teeth. He also wrote accurate descriptions of secondary dentines and of internal absorption of dentine and of calcifications of the pulp. He published many papers in Guy's Hospital Reports and in the Transactions of the Pathological Society. Salter was a man of precise habits; every Thursday morning at noon he rode into the Front Quadrangle in a four-wheeled cab and proceeded to the room by the entrance to Out-patients, which was used as the Dental Department. In private life he was a sociable and active member of the Athenæum Club; he was also devoted to country pursuits and rode regularly to hounds. He died in 1897 at the age of seventy-two.

I have not time to say much of Henry Moon, the son of a doctor, who became Assistant Dental Surgeon to Guy's in 1870. You are familiar with Moon's probe and with the elevators which he devised and which, I believe, some practitioners still use. Moon published many papers; of these the most important was that dealing with "Irregular and Defective Tooth Development" in 1877. In this he based his observations upon a hundred cases, seen over a period of twelve years, and described many teeth affected by congenital syphilis or by the mercury given for the treatment of the condition, especially showing how the first permanent molars were not properly developed, cusps upon the crown tending to coalesce and the enamel being poorly developed so that a dome-shaped "Moon's molar" resulted. Moon was followed in 1887 by F. Newland Pedley, F.R.C.S., L.D.S., to whom, with Sir Cooper Perry, the inception of the Dental School, as we know it, is due.

I hope that I have convinced you that these teachers during the first hundred years of the Dental School at Guy's Hospital, did in truth believe and practise that which is true for every professional man:—it is more blessed to give than to receive. The writer of ancient times who originally set down the saying which was chosen as the motto of our community, stated it, not as a proposition for debate, but as an indestructible fact, *Dare Quam Accipere*.

The Editor will, at all times, be glad to consider articles or sketches, provided that they are accompanied by the writer's name and address, not necessarily for publication. Authors who desire reprints of their papers should make their own arrangements with the Printers when they return their proofs. **All contributions to be addressed to *The Editor*, who does not accept responsibility for the views expressed by contributors.**

Sector News

Guy's Letter

UNLIKE our suburban friend, we seem to be peculiarly short of "hitherto unconfirmed rumours." The only one ready for print at the moment is that Er has been "ick." Profiting from experience gained in the last few weeks we are waiting for time to produce for us a yellow coolie. The phenomenon of reversion, as you might say.

Martin, our late President of the Residents, and Hammond have left us. Anyone who knows either will realise what a loss this is. Kenneth has made a great name for himself here as a delightful personality, a night bird, and a wild enthusiast at the end of the episiotomy scissors. Geoffrey, philosopher, poet and chief beater up of unruly authorities, made a remarkable number of friends in an equally remarkable short time. We are very sorry to lose both, and hope that they are enjoying well-earned holidays with their wives before taking up their new jobs.

Dai Rees, Paddy Finnegan and the longer Cross have come to join us as the new O.P.O's. Naturally we welcome them.

The Resident's going off dinner this time was held in Nuffield House. Inebriation was conspicuous by its absence. Ted French, however, was still leading the impromptu community singing at 1.30 a.m. The Professor, in a speech of thanks, revealed himself a great protagonist of youthful marriage, and drew a happy picture of the soldier returning from war to an haven of peace. We hope those present have not overlooked the possibility of being the civilian ex-soldier returning from work to a home of war. Naturally one is chiefly worried about the J.M.O's. The wintry one in particular gives us grave concern at times.

Clifford, following an acute attack of faceache and psychogenic apnoea, is now on holiday. We eagerly await his return. There was a dance on February 16th.

H. A. R.

Sherwood Park Letter

IT has been said by someone of distinction that want of occupation is equally the scourge of society and solitude, that nothing begets more nothings—gossips, tittle-tattle and lies. These are strong words, but if one can infer from them that conversational pieces purely for politeness' sake are to be avoided, whilst conversation either out of necessity or interest in some occupation is to be applauded, then I agree with the first of these denunciations and claim applause for the majority down here. For interests have varied and occupation has reached critical strain.

The weather has lent itself admirably to two types of students: to those, first, who require biting air and vigorous exercise, coupled with the sadistic thrill of plastering someone's face with snow; and to those, a more human type, who appreciate that slight slackening of Home Guard activities, who prefer a quiet round of poker and a pennyworth of chips. Both types have justified their existence; the former by the monumental acceptance of a challenge from the nurses to a snow-fight when with fierce ecstasy and deplorable bad taste the fellows waded in, armed to the teeth, to enter a dire and bloody battle; then those days of violent ice-hockey on the lake, where the greatest difficulty lay, not in keeping to the rules (there were a few !), but in preventing imaginative Wembley champions from inventing others.

As to whether want of occupation produces gossip, tittle-tattle and lies—only when a meeting takes place in which two political parties versed in the necessary jargon meet on seemingly equal footing does one realise to what extent some will go to oust the opposing side—only then does one fully appreciate the gossip, the tittle-tattle, and (be they ever so small and white) the lies.

A political meeting may be interesting, it may even be exciting, but it cannot be classed with a mysterious fire, a fire which breaks out late in the night, having no flames but dense clouds of smoke and a chemical odour; by virtue of this could be seen the efficiency of the Home Guard on duty; the firing of a warning shot (so perfectly timed one would almost say a preconceived plan); the prompt action taken by the sergeant in charge, who made all necessary 'phone calls; the impressive running along corridors with fixed bayonets; and, to crown it all, the report that the location of the fire could not be found, but that all steps regarding the safety of the hostel had been taken. Safety is an inexplicable feeling; it suffices to say that it exists.

E. S. F.

Farnborough Letter

THE cold weather has been accompanied, not unnaturally, by a great spate of admissions —many of them seriously ill people deserving of maximal care and attention, but many, alas, not really sick, but simply too young or too old to look after themselves. Imagine the relief among Housemen and Sisters when news came through that, in order to relieve the almost in-

tolerable congestion here, a convoy was to be evacuated to another (non-teaching) hospital in the Sector, but imagine the consternation which followed when the edict was promulgated that only " acute " cases were eligible for transfer. A simple calculation reveals that since the War this Hospital has acquired some 400 additional beds in the hutment section, while it has been deprived of some sixty owing to enemy action, and that there must, therefore, be some three hundred more inmates in the Hospital than there were before the War. There is no evidence that the local population has increased and the presumption is that either there is more serious illness about or else the outside doctors are more ready to recommend the transfer of patients to hospital. From the state of many of the " patients " admitted it has become apparent that they are not in need of hospital treatment by reason of their bodily condition alone, so that their admission must evidently have been determined by the lack of facilities for domiciliary care. This breakdown of home treatment can in turn be traced to two factors—first, the inability or unwillingness of the patients' relatives to undertake the extra work entailed; and, secondly, the inability of the doctors to attend the cases at home. So far as the relatives go, the currently incontrovertible explanation which is invariably given is " the War." So far as the doctors are concerned, the explanation seems to lie in the fact that so many general practitioners have been called to the colours that those remaining are overworked to such an extent that they are not able to do much more than arrange for the disposal of their patients.

If this be a true assessment of the present position, it would be manifestly improper for anyone working in a hospital to complain about the increased number of admissions, which should be accepted as part and parcel of the burden of added work which all are expected to bear during war-time. But one is tempted to wonder whether the existing arrangement is the best: whether it is right to lump all and sundry together in a general hospital with, in many instances, no more than a locker's breadth between the beds; whether it would not be better to segregate the " acute " from the " chronic " sick and both from the " healthy but homeless "; whether it would not be possible in these days of high wages to pay people an adequate remuneration to enable them to perform cheerfully and efficiently the difficult and delicate task of looking after those very deserving folk who, though not requiring skilled medical or nursing attention, are yet not able to look after themselves instead of spreading these unfortunates haphazard among the acutely ill, and expecting keen young residents and probationer nurses to deal with them as part of the price of their training. Some may say that we were hopelessly spoilt in the palmy pre-War days at Guy's, when a 'phone call from the Surgery would suffice to accommodate any inadmissible case. This is not altogether true because, during a brief incursion into the provinces, some of us have worked in a hospital (run by a local authority) where the wards were divided into those which required to be visited twice a day and those which required visiting once a week. The patients there all seemed perfectly contented, the nurses never appeared flurried, and though there were no students thirsting for knowledge and the Sisters did not have *Dare quam accipere* inscribed on their badges and though there was a war on, yet there was no possible excuse for a doctor writing a letter like this. Possibly some day circumstances will warrant giving our hobby-horse to a salvage campaign; meanwhile we have had one more grand ride.

V. G.

The Wildernesse Letter

THIS week we think our friends will require us to tell the sad tale of the filterable virus. The parotid infection continues to spread and most of us now are tucked up in bed. Physicians and surgeons come prodding our lumps and wisely diagnose the condition as mumps. One Houseman, named Patrick, thought he could soon clear 'em, so sat on a needle and took in some serum; but this prophylaxis was not as intended, for, three mornings later, *his* freedom was ended. Jones is another poor chap who has got 'em, or else by now he'd be at Locksbottom. Vulliamy came at a difficult time (no word can we find with his surname to rhyme); his transfer from Pembury was not a smooth passage, but now he finds solace in light and in massage. We wish that our Super. were more a physician; he threatens us all with cervical incision through which to remove our inflammatory lumps. So we hope very soon we'll be rid of the mumps.

Correspondence

ROLL OF WAR SERVICE.

To the Editor of the GAZETTE.

SIR,—The School Council have approved a scheme for the preparation of a Roll of War Service of Guy's Men on Active Service which will serve as a record of all Guy's men serving, or who have served, in His Majesty's Forces during the period of the present hostilities.

Much work has already been done in collecting the essential material, but Guy's men will realise that such a task cannot be accomplished without the co-operation

of all concerned, and, in order that this record may be as complete as possible, members of Guy's are invited to send detailed information of their rank, unit, promotions, honours and decorations, foreign service and appointments (where this can be divulged), wounds, and any further information for incorporation in the records now being compiled.

It is particularly desirable to obtain obituary notices of those who have lost their lives, and photographs.

All information to be sent to The Secretary, Roll of War Service, Medical School, Guy's Hospital, S.E.1.

Yours faithfully,

GEORGE WINSTON.

The Wills Library,
Guy's Hospital,
London Bridge, S.E.1.

GUY'S STUDENTS' UNION

To the Editor of the GAZETTE.

SIR,—Two weeks ago some of us, recognising the need for a representative Students' Union in Guy's, decided to work for the establishment of a Tunbridge Wells Committee representative of all the many sections of us here and at near-by Pembury. This we hoped would affiliate to the British Medical Student Association and thus link up Guy's with the only national Medical- and Dental-student organisation. We even dared to hope that, perhaps, other Sectors of Guy's would follow our example and, having formed their Student Unions, link up with us.

Imagine the mixed feelings with which we received a letter from London telling us it had been decided to set up a Guy's Students' Union, and would we please send two delegates to London! Furthermore, it appeared that London, for reasons so far not divulged, had rejected the idea of affiliating to the B.M.S.A., and with representatives from eleven other hospitals were busy deciding what they would do instead of this. So things began to move fast. What we had hoped to accomplish by the middle of next term will have to be done in just over two weeks. Everyone—Staff and students—has responded nobly, and by next Friday (February 20th) we will have a Tunbridge Wells Students' Union Committee elected with proportional representation. This committee will be officially constituted and send its full quota of delegates to an important inter-hospital meeting on February 20th, which will discuss the question of a national organisation.

Out of a rapidly changing situation, a representative committee, already partly selected, has issued the following outline :

FORMATION OF A STUDENTS' UNION (TUNBRIDGE WELLS).

This issue can be divided into two sections :—

Firstly, a Tunbridge Wells committee elected with proportional representation, will be set up. For purposes of co-ordination this committee will send a proportional number of representatives to an all-Guy's committee.

Secondly, the question of affiliation to a national organisation. We all agree that the Students' Union should affiliate to, and *via* the central Guy's committee, send a delegate to a national medical student organisation. For this we have to choose between: (1) the B.M.S.A., (2) a proposed organisation affiliated to the B.M.A., (3) an independent organisation of some London medical schools, also proposed.

Before discussing the three alternatives we would suggest that there can be no division of the best interests of medical and dental students, and thus no basis for more than one national organisation. When we examine the arguments why more than one are proposed we find that these are chiefly due to "prejudices amongst some of the senior staff and some clinical students against the National Union of Students," of which body the already existing B.M.S.A. is a faculty sub-committee. We will naturally wish to examine the facts behind these prejudices and decide whether they are insuperable.

With regard to the B.M.S.A. there are the following points :—

(*a*) It is already in operation.

(*b*) It already has considerable support.

(*c*) The B.M.A. itself has already recognised it to the extent of consulting it.

(*d*) It is a student organisation connected to a national student organisation (N.U.S.).

(*e*) It is not linked to any section of medical opinion.

(*f*) The B.M.S.A. is non-political.

With regard to the proposed organisation affiliated to the B.M.A., it has been suggested, as yet unofficially, that such an organisation would have the following terms from the B.M.A. :—

(*a*) Financial support—£500 per year, if all Medical Student Unions in England and Wales affiliate.

(*b*) Liberty of constitution and expression.

(*c*) One representative on the B.M.A. Council.

(*d*) An office and secretary.

We think these terms very good, but do not think that such an organisation should be supported for the following reasons :—

Firstly, the B.M.A. does not represent all doctors; the Medical Practitioners' Union would be excluded from the arrangement. If all Medical Student Unions were affiliated to the B.M.A. organisation (as the B.M.A. suggests), all students would be automatically allied to one section of medical opinion. Secondly, already many medical schools are affiliated to the B.M.S.A., directly or through the N.U.S. In our opinion it would be impossible to change this, and thus (besides not fulfilling the B.M.A.'s condition of total affiliation) setting up an organisation under the B.M.A. would inevitably split the national representation of medical students. Thirdly, we doubt whether dental students would have their proper rights under a B.M.A. organisation.

With regard to the setting up of an independent organisation of Student Unions, we realise that we have not yet been sufficiently informed on this point, but apparently it would be an organisation of some (but not all) London medical schools. The objection that the proposed organisation would cause a division, not only in the national, but also in the London medical student representation again applies. Further, the advantages of financial support and stability which would be enjoyed under the B.M.A. organisation would be lacking. We wish to be quite sure of the financial status of any national organisation which our Students' Union is to join.

For the present, therefore, we suggest that our Guy's Students' Union be set up with all due speed and the question of national representation settled by discussion.

We are, etc.,

PROVISIONAL COMMITTEE (STUDENTS' UNION),

5, Sandrock Road,
Tunbridge Wells, Kent.

Sport

Rugby

GUY'S *v.* MIDDLESEX HOSPITAL.

(*Played at Chislehurst on Saturday, January 10th.*)

THIS was a most enjoyable game, full of interest from start to finish, with both sides playing extremely well. Middlesex had an overwhelming advantage in the set scrummages, but this was neutralised by good marking on the part of Guy's, who allowed the opposing backs little chance of driving home their attacks. In the loose Guy's were very fast and, being much keener on the ball, the forwards were able to give their outsides many opportunities to break through.

Guy's opened the scoring after fifteen minutes with a solo try by Brangwin. Taking a pass from Strathie, he ran through to the posts for Mullins to convert. Middlesex developed an attack and twice in succession Strathie relieved with kicks to touch. Gartrell made a run across field, but finding no opening, cut back to the wing and was tackled. Strathie broke away but his pass went loose, and as Davies, the Middlesex scrum half, passed out to the fly half, Mullins intercepted, but Guy's were penalised and Jordan kicked to touch.

The Middlesex centres tried the punt ahead to make headway, but Guy's were not caught napping; they nearly scored, but a scrum was given on the Guy's line, to be followed by offside against Guy's, from which Robinson missed with a good attempt.

A chance came to Guy's as Scott kicked ahead; the ball bounced awkwardly in front of the Middlesex goal, but the swift tackling of Middlesex prevented Guy's getting the ball away.

Following the interval Guy's attacked with a forward rush, and Brangwin, unfortunately, gave Gartrell a forward pass, which was followed by Lillywhite kicking over the Middlesex line for a drop out. A fine Guy's three-quarter movement ended in a knock-on, but from a line out Wilshere dribbled over the line to touch down for a try which Mullins failed to convert.

Strathie took a neat pass from Scott, but as he kicked ahead Middlesex were awarded a kick. Gartrell tried a drop at goal, but Guy's were penalised for off-side, and later Gartrell brought off a nice tackle to stop Harper, his wing opponent. A grand movement between Camp and Strathie, with some nice inter-passing, ended in a scrum on the Middlesex line, and Camp was prevented by inches from crossing in the corner.

Middlesex forwards carried play to Guy's half and Jordan almost sent Harper through. Middlesex continued to press for a while, but Guy's were awarded a kick in their own "25." Then came a grand try to Guy's. The ball travelled from Scott to Strathie and then to Gartrell, and Strathie, taking the return pass, ran in to score under the posts for Mullins to convert. As fine a try as one would wish to see, the whole movement being carried out with much speed.

Middlesex tried hard to reduce the lead, and after Swanson had been tackled in possession, a kick over the Guy's line enabled Glover to get the touch down which was converted by Robinson with a good kick. Both sides attacked in turn; Lillywhite charged down a kick which was followed by a scrum. Jordan was caught in the nick of time, and in the closing seconds another fine movement by Guy's backs nearly led to a score. Camp threw a long pass to Strathie, and the ball travelled *via* Brangwin, Gartrell and back again to Brangwin, who could not quite get through.

Score: Guy's, 2 goals, 1 try (13 points); Middlesex, 1 goal (5 points).

Team.—T. L. T. Lewis; R. F. Camp, D. M. Strathie, P. L. Brangwin, P. C. Gartrell; W. H. Lillywhite, N. I. Scott; B. H. Wilshere, A. B. Lee, J. D. Everall, A. G. Albers, J. Breen-Turner, T. W. Renton, J. R. C. Matthews, M. R. Mullins (captain).

Hospital Information, etc.

Notices

WE would remind our readers that the annual subscription to the *Gazette and Directory of Guy's Men (Medical and Dental)*, 12*s.* 6*d.* per annum post free, is now due and, to avoid the additional cost of postage, it would be appreciated if they would kindly forward the sum to The Manager, *Gazette* Office, Guy's Hospital, S.E.1.

There will be a Massage Department Dance on Saturday, February 28th, from 8–11.30 p.m. (by kind permission of the Matron in the Nuffield Nurses Home). Double tickets at 3*s.* 6*d.* are obtainable in the Massage Department.

Papers by Guy's Men

Nicholson, E. S., and Another. Value of Procaine infiltration in the diagnosis and treatment of Fibrositis. *Brit. Med. J.*, 1942, i, 65.

Close, H. G., and Another. Recurrent Neutrophil Agranulocytosis. Lancet, 1942, i, 99.

Worster-Drought, C. Observations on the Diagnosis of Chronic Arthritis. *Med. Pr.*, 1942, **207**, 54.

Douthwaite, A. H. The treatment of Chronic Arthritis. *Ibid.*, 58.

Harkness, A. H. Gonococcal Arthritis. *Ibid.*, 60.

Gill-Carey, C. The Management of Acute Nasal Sinusitis and its Complications. *Practitioner*, 1942, **148**, 76.

Bray, George W. Hay Fever. *Ibid.*, 88.

Mackenzie, K. W. Frontal Sinus Ventilation. *J. Laryngol. Otol.*, 1941, **56**, 391.

Changes of Address

E. K. Breakspear, L.D.S., R.C.S., Central School Clinic, Gulson Road, Coventry.

V. B. Reckett, Major, R.A.M.C., Pretoria Club, Pretoria, South Africa.

The Services

Mentioned in Dispatches.

Ft.-Lieut. H. B. Shay, R.A.F.

Acting Surg. Lieut.-Cmdr. J. M. Robertson, R.N.V.R. (H.M.S. *Phoebe*).

Surg. Lieut.-Cmdr. L. G. Yendoll, R.N.

Births

HARVEY.—On February 7th, 1942, at Avenue Maternity Hospital, Bridlington, to Sheelagh (née Phelps), wife of Fl.-Lieut. Warren Harvey—a daughter.

EDS. { N.A.N. H.F.O.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI *7th March 1942* *Number 1399*

PASSIM

THE new boy is always uneasy. He is, or believes himself to be, the focus of every eye in the community. The undone button or the ill-adjusted cap become for him a tragedy threatening to end his career in disgrace and infamy. The tyro copies his predecessors until he has acquired the poise needed in the upper air; until, like the magnanimous Mr. Pott, editor of another Gazette, intoxicated by the potentialitesi of the editorial chair, he bears the burden of public disaster and private woe upon his shoulders unflinching.

What is the function of "Passim"? From reading past contributions it is easier to remark upon their diversity than similarity. "Passim" is a quick change artist, one moment barracking with the groundlings, next fortnight the public conscience with nasal twang and calvinistic wrath: merry Andrew has become melancholy Jaques. It is hard to decide which to try—the sword of Garvin or the string of sausages. Harder still when, in a moment of rashness, one has abjured cliché. —cliché, the novice's megaphone through which he can roar lustily and be sure that none will heed him; cliché, that pidgeon tongue, the small coin of conversation whose trashy glitter blinds us to meaning. Folly to have foresworn kindly cliché; but worse still to abstain from discussing the conduct of the war. It is a fine thing anonymously dressed to exhort one's readers, country, statesmen, allies, people, young, old and middle-aged, infants and generals, to do thus and thus. It is a diverting occupation which improves the digestion. The prophet of disaster dines no worse because of his melancholy prognostications. There is always the gossip column, but it is unjust to poach upon our Sector correspondents. There remains a modest effort to combine local problems of the Hospital with the general ones of medicine now, an attempt to record the synthesis of the individual and society as it is seen at Guy's. Every writer hopes that he will be read—a presumption necessary to undertake such a trade. No doubt the snipers, as they spit on their trigger fingers and wonder whether it is worth silencing this scribbler, murmur: "Vous l'avez voulu, Georges Dandin, vous l'avez voulu."

JUST before the War began the Medical School Office had a plan by which medical and dental students would receive treatment in the Hospital for a small annual payment. There was to be a levy of a few shillings, and from the fund those who fell ill would have their treatment paid for. This scheme would have helped both the Hospital and the students. Nothing more has been heard of it—why not?

THE question of the Home Guard is still unsettled, but the action of the Colonel of the Farnborough Batallion Home Guard will help to settle it. This officer understands the problem of training students. He realises that they are specialists, reserved only for the purpose of becoming doctors, but that before their final year most students have time to become trained fighters if the training is adapted to their qualifications. These qualifications are youth, educability, intelligence and impatience. The Home Guard must, like any large organisation, train at the speed of its slowest recruit; this means constant attention to routine duties because many of its members are not young and are unused to learning quickly. The Colonel has offered to form a company run and trained by the students themselves. Leave will be given for all examinations, and during the final year this will be the amount of time that the individual thinks he will require. The aim in training will be efficiency and not simply a time-sheet recording parades attended. This sympathetic attitude has done much to solve what might have become a bitter controversy. The majority of the students at Farnborough are now joining the Home Guard of their own free will, because they hold that it would be no imposition to have arms and be trained in their use, if there were an attempt at invasion.

There remains the present batch of final year students. If it is to be of any use the first three months' training in the Home Guard must be intensive. A student who is taking his finals, especially if he is combining Conjoint and M.B., must work as hard as he can, not only for his personal gain, but to remedy the national shortage of young doctors. It is impossible to do these two jobs at the same time. Home Guard training does not consist of doing a few parade ground movements with a rifle, learning the "slope," the

"port," and "reverse" arms. The modern Home Guard is sniper, gangster, bombardier, artillerist and sapper all in one. It would be a stupid gesture to take weapon, boots and battle-dress and then depart on permanent leave, assured that some official conscience was satisfied by such waste. At the moment those final-year students not on the rota have no instructions what to do if the blitz begins again or invasion is threatened. There should be a plan to distribute them throughout the Sector as student house officers, where they would relieve the pressure on the already reduced staff of the hospitals. If the authorities believed that our Sector was not needing more men then they would be able to offer help to less fortunate ones—invasion casualties would be higher than those seen in the heaviest blitzes. There is even some doubt about the relative claims upon students of the Hospital and the Home Guard. These weaknesses in organisation must be remedied. Bismarck once said: "Fools learn by experience; I prefer to learn by other people's experience." We have both our own and other people's experience—to ignore it would be folly.

THE formation of a Guy's Students' Union, affiliated to some form of national medical student organisation, has come at a time when students are being asked by their seniors in the profession to help with its problems after the War. For three years of what must have often seemed useless effort the national organisation has been growing. Guy's had an observer at the earlier committee meetings. As however, it had no representative Students' Union it could give very little help, but the breaking up of the Medical School has resulted in a cohesion among its members which appeared impossible before the War.

In the correspondence column there is detailed information about the scheme, and a hasty letter, which was withdrawn by its authors when the last number of the *Gazette* had gone to press, is refuted.

Everyone is indebted to the determined organisers both local and national. They have done well. Lack of money has scuttled many enterprises, but in spite of generous offers of support from the British Medical Association and the National Union of Students the present committee have rightly decided that it is to be self-supporting. People can show whether they support the new union or not by subscribing to it; if they are too mean to pay a very small annual subscription which could be part of the Clubs' Union fees they are plainly too mean to advise upon the future of medicine and medical education. All the London hospitals except one have supported the scheme; it is not clear whether sloth or a childish attempt at "independence" produced this piece of anarchy.

The weeks of negotiation have been remarkable for the flexibility and generosity shown by the N.U.S. and its sub-committee, the British Medical Students' Association. When it was clear that combination with the N.U.S. was not wanted by many hospitals, they quickly agreed and have even allowed the name B.M.S.A. to be used for an association more representative than their own. Considering the many months of work which have been spent on building the present B.M.S.A., conciliation could not go further.

The details must be discussed throughout the Sector during the next few weeks, so that the elected spokesman of this Hospital will be able to help in making a national association. This is an occasion when individual action expressing itself through a collective undertaking will be more use than agitating, grumbling, writing letters, or contemplating post-war Utopias and post-war hospitals: for while action without deliberation is often fruitless, debate without action is always futile.

HURRICANE DANCE

A most enjoyable dance in aid of the O.P.D. Hurricane Fund was held in the Nuffield Nurses' Home on Monday, February 16th. The attendance alone testified to the popularity of the event, and it was pleasing to find all groups of hospital life represented. Preparations for our enjoyment had been most carefully made; novelty followed novelty, and Mr. Ripman is to be congratulated on his achievements as M.C. A ladies' invitation dance taught many a promising Romeo what it feels like to be a Wallflower; an elimination dance revealed much that was unexpected of the private lives of those present, who included spitfires, defiants, bombers and beau fighters—to say nothing of the night fighters who arrived from the "local" at 10.30 p.m. Tactic followed tactic.

A buffet supper of pre-war standard was provided at the modest *à la carte* charge of a penny a piece; Raffles added yet more to the coffers. Everything, except admission, cost a penny a time and, without hardship to anyone, the party realised the remarkable profit for the Hurricane Fund of £20. That so much can be obtained from so little is an additional reason for hoping that the worthy cause may soon benefit further by another similar evening.

To Sister Bird and the Almoners and Staff of the O.P.D. much praise is due for their enthusiasm and the high success of their venture, while all will have appreciated the two generous extensions of time allowed by Sister Wittrick in view of the success of the dance. The organisers wish to thank all those who helped and those who so generously supported them.

Splenectomy

A Clinical Lecture delivered at Guy's Hospital by Nils L. Eckhoff, M.S.

SPLENECTOMY is an operation not frequently seen on our operation lists, but as I have recently had to do such an operation at the Wildernesse I thought it would be an opportunity of giving you some information on this interesting subject. The patient above mentioned was sent to my Out-patients with a note from her doctor to say that he had set out to remove a tumour that he thought was an ovarian cyst when, to his horror, he found it was an enlarged spleen (*sic*). This was fifteen months ago, and he had not been able to persuade the patient to attend for further surgery.

This history has two important lessons. In the first place nobody should decide to operate on a patient unless he feels that he is competent to deal with any condition that he may meet. In this country, at all events, there are always surgeons available, even in cases of emergency, competent to deal with any situation. It must be exceptional for the haste to be so great that a surgeon cannot be summoned by the time the patient is transferred to a hospital and made ready for operation. Indeed, there are many instances where such speedy surgery is to the patient's disadvantage. For example, shocked patients should not be operated upon until the shock has been treated, and in intestinal obstruction no operation should be started until the upper bowel has been "decompressed" by duodenal suction.

The next lesson is that it should normally be possible to differentiate between an ovarian cyst and an enlarged spleen. An ovarian cyst presents as a central globular swelling, limited in its upward excursion by its pelvic attachment, but easily displaced downwards. There is usually dulness over the swelling. A splenic swelling, however large, presents a flat anterior surface with a notched medial border, and always emerges from under the left costal margin so closely that it is impossible to insinuate a finger between the swelling and the costal margin. Dulness is usually present over the swelling and this dulness can be followed back into the flank until it merges with the dulness over the sacrospinalis muscle.

In our case the splenic swelling extended to the midline, and I was able to detect resonance over part of the swelling; but let me tell you that this is the first instance in which I have found intestine between an enlarged spleen and the anterior abdominal wall.

Let us now consider the indications for splenectomy :—

(i) Rupture of the spleen, following direct injury, indirect injury or no known injury at all;
(ii) Wandering spleen;
(iii) Cysts of the spleen, idiopathic or hydatid;
(iv) Thrombocytopœnia;
(v) Hæmolytic (acholuric) jaundice;
(vi) Splenic anæmia;
(vii) Gaucher's splenomegaly;
(viii) Von Jaksch splenomegaly;
(ix) Egyptian splenomegaly;
(x) New growths and inflammatory conditions.

Rupture of the spleen may be due to a direct injury as from a run-over accident, indirect injury as from a fall from a height, or be spontaneous, in countries where splenomegaly is common. I can well remember Mr. Rowlands telling us of a girl whose spleen ruptured while sitting in the cinema with her sergeant friend. The signs are those of internal hæmorrhage with dulness extending from the left flank, where there is usually tenderness. Operation must be prompt, and there may be considerable difficulty in controlling hæmorrhage. It is sometimes necessary to control the splenic pedicle by finger pressure until the spleen can be delivered.

By wandering spleen we mean a spleen which is excessively mobile and can be pushed into different parts of the abdomen. It may cause discomfort and need removal.

Hydatid cysts may be found, particularly in countries in which hydatid disease is common. It is usually diagnosed by Casoni's intradermal test and a complement fixation test. Polycystic disease may affect the spleen, and occasionally single cysts occur, containing clear fluid, that may represent the residue of a blood cyst following trauma.

Thrombocytopenia is an interesting condition in which the blood-platelets are reduced to 70,000 or less, and purpura, with bleeding under the skin and from the mucous membranes is a menace to life. There is a marked secondary anæmia, a prolonged bleeding time and a positive capillary resistance test, whereby a sphygmomanometer cuff inflated to between the systolic and diastolic pressure induces subcutaneous petechiæ below the cuff. Splenectomy produces a sudden and remarkable improvement in the condition. The spleen is usually small.

Acholuric jaundice may be congenital, when it is often familial, or acquired. Whether the bone marrow or the spleen are primarily at fault is a matter for debate, but the bone marrow pours out masses of immature red cells and the spleen destroys red cells at a great rate; the spleen enlarges in consequence. There is anæmia, increased fragility of the red cells (to hypotonic saline), reticulocytosis and a lemon yellow jaundice with urobilinuria. Pigment stones form in the gall-bladder, and the patient may have attacks of gall-stone colic. The liver may become cirrhotic later in the disease. Splenectomy with attention to the biliary system at the same time—or later—is the correct treatment.

Splenic anæmia is a condition of splenomegaly associated with a hypochromic microcytic anæmia. Cirrhosis of the liver is also present, but whether this is a sequel to or merely a concomitant of the splenic changes is not known. When the liver is markedly involved the condition is usually called "Banti's disease." One common complication of the disease is hæmatemesis from dilated œsophageal veins, and if the liver cirrhosis is not too far advanced splenectomy is indicated, but hæmorrhages may still occur, and some writers maintain that the final outcome of the disease with ascites and death from liver insufficiency is not much affected by removal of the spleen.

Gaucher's splenomegaly is a rare familial disturbance of lipoid metabolism in which there is enlargement of the spleen, liver and lymph glands, with secondary anæmia, thrombocytopenia with hæmorrhagic tendencies, pigmentation of the skin and bone changes. The disease may become apparent in early life or as late as sixty years, but it is gradually progressive, more rapidly so in children. The underlying pathology is apparently the deposition of a substance called kerasine in cells of the reticulo-endothelial system, and is recognised histologically by certain large "Gaucher cells" in the spleen, bone marrow, liver and lymphatic glands. These cells are clear, with foamy cytoplasm and as many as twenty small nuclei in each cell. In the cytoplasm is a fine network in which the kerasine is deposited. The bone changes are flask-like expansions of the lower ends of the femora, periosteal thickening, and a tendency to spontaneous fracture. Splenectomy is thought to prolong life, and certainly cures the thrombocytopenia and relieves the patient of the splenic tumour which may be enormous.

Von Jaksch's splenomegaly occurs in infants, and is associated with anæmia and the presence of myelocytes in the blood—and may be confused with leukæmia. Slight enlargement of lymph glands and liver may occur. Petechial hæmorrhage and epistaxis are found also. There is marked anæmia with nucleated red cells and a moderate leucocytosis.

Splenectomy has been practised, but it is said that 65 to 70 per cent. of the cases improve spontaneously.

Egyptian splenomegaly is a disease of unknown etiology (? bilharzial) in which a febrile illness is followed by splenomegaly. If treated by splenectomy at this stage the disease is arrested, but otherwise it will progress to involve the liver in a cirrhotic process, which is inevitably fatal. Stiven has removed over 1,000 such spleens.

Neoplasms and inflammatory diseases of the spleen are rare, but may be encountered occasionally in cases considered suitable for splenectomy. Benign neoplasms are very rare, but a primary lympho-sarcoma and secondary carcinoma are not so uncommon.

Occasionally tuberculosis or syphilis produce a large spleen, and abscess also occurs.

After splenectomy certain changes occur in the blood, in the lymphatic glands and any spleniculi that may be present, in the reticulo-endothelial system, in the bone marrow, and the liver.

There is a transient hypochromic microcytic anæmia which recovers in about 3–4 months and there is permanent decrease in fragility. The platelets are temporarily increased and there is marked polymorphonuclear leucocytosis, but the white cell count slowly returns to normal. The lymphatic glands and any spleniculi are enlarged owing to increased hematopœsis. The cells of the reticulo-endothelial system proliferate, and the yellow marrow in the long bones is slowly converted to red marrow. Regeneration of the blood after hæmorrhage is said to take place more slowly. Owing to the cessation of the splenic circulation the liver is called upon to do less work.

The *technique of the operation* calls for a little consideration. The stomach is emptied with a tube which is retained in position during the operation. The incision may be a left paramedian or a left subcostal. Some use an incision running obliquely downward and forward. After opening the peritoneum the gall-bladder must be examined, especially in acholuric jaundice. The liver must be examined for evidence of cirrhosis, although its condition can to some extent be gauged by a lævulose tolerance test before operation. The rest of the abdomen should be quickly explored to exclude other disease. The spleen is now completely palpated to judge its mobility and to exclude adhesions. Rough handling in the presence of the latter may produce almost uncontrollable hæmorrhage.

In fortunate cases the spleen can be delivered

outside the abdomen with ease at once. In others the most intense adhesions make its exposure fraught with great danger. Adhesions must be visualised and divided carefully with the diathermy coagulation current.

The gastro-splenic omentum is now sought, its vessels in the lower two-thirds ligatured in two places and divided between the ligatures. The posterior leaf of the lieno-renal ligament may then be divided to increase the mobility of the spleen. The upper third of the gastrosplenic omentum may now be divided between ligatures, and the splenic pedicle proper identified. The tail of the pancreas is held aside in the finger of the left hand and the splenic artery ligatured in three places and divided between the second and third ligatures. A certain amount of the blood in the spleen may still return to the circulation during this period, and now the splenic veins are ligatured and divided. Any spleniculus should also be removed (except in the case of rupture) lest the disease be perpetuated by its hypertrophy.

The general mortality is about 10 per cent., is greater in ruptured spleen and in those cases where the liver is cirrhotic, but less in acholuric jaundice and thrombocytopenia.

I now show you a number of spleens from the Museum and also the one of the patient I operated upon last week. This was her history :—

Mrs. E., aged fifty-five, was admitted to hospital for enlargement of the abdomen. Family history —nil relevant. Previous diseases—nil relevant, except anoxæmia following the birth of a child twenty-two years ago. No malaria.

Present disease : Sixteen years ago her doctor noticed that, following a confinement, she had an enlarged spleen, though it appears that it was not greatly enlarged. The confinement had been quite normal. Seven years ago she had some fibroids removed for menorrhagia. Since then she has noticed that the lump has gradually got bigger and she was feeling " as though the abdomen would burst." She also had frequency of micturition. In July, 1941, she had a laparotomy for (?) ovarian cyst, but an enlarged spleen was found and nothing was done. Backache has been very trouble some latterly.

On examination the heart and chest were normal. In the abdomen was a firm, smooth lump stretching from the left subcostal margin to the left iliac fossa. Notch palpable just below the umbilicus. One could not get above the swelling. Liver slightly enlarged. No ascites detected.

Blood picture.

Red blood count, 4.96 million per c.mm.
White blood count, 5,100.
Hæmoglobin, 94 per cent.
Colour index, 0.96.
Polymorphs, 70 per cent.
Lymphocites, 28 per cent.
Monocytes, 1 per cent.
Eosinophils, 1 per cent.

Fragility.—Cells begin to hæmolyse at 0.5 per cent., complete at 0.45 per cent.

Lævulose tolerance test.

Fasting 115 mg. per cent., 50 gm. lævulose given.
After ½ hour, 120 mg. per cent.
1 hour, 125 mg. per cent.
1½ hours, 130 mg. per cent.
2 hours, 150 mg. per cent.

Dr. Hampson thought this was a grossly abnormal lævulose tolerance. In spite of this splenectomy was done, in view of the dragging pain and backache.

The spleen weighed 2½ lbs. and measured 10 inches in its longest diameter and appeared granular on the surface. It was sent to the Museum intact. The liver also appeared somewhat granular although there was no marked cirrhosis.

Blood picture twelve days after operation.

Hæmoglobin, 76 per cent.
Red blood count, 4.8 million per c.mm.
White count, 9,500.
Polymorphs, 72 per cent.—slight left shift.
Eosinophils, 3 per cent.
Lymphocytes, 17 per cent.—a few plasma cells.
Hyalines, 8 per cent.
M.C.D., normal.

Stained films.—Films are very streaky, suggesting high corrected sedimentation rate.

Red cells—slight microcytosis, a few polychromatic cells, most of which are stippled, a few poikylocytes, anisochromia and reticulocytes, 1 per cent.

No nucleated red cells.

Numerous platelets.

Remarks.—Present blood picture compatible with post-operative condition. No sign of polycythemia at present.

Since operation her general condition has been good, the most noticeable feature being the fact that she now has a very " high " colour of the face, with a suggestion of cyanosis.

Section Report : Marked fibrosis. Picture otherwise consistent with splenic anæmia.

WE would remind our readers that the annual subscription to the *Gazette and Directory of Guy's Men (Medical and Dental)*, 12*s.* 6*d.* per annum post free, is now due and, to avoid the additional cost of postage, it would be appreciated if they would kindly forward the sum to The Manager, *Gazette* Office, Guy's Hospital, S.E.1.

Obituary

HUGH MILTON STEWART, M.A., M.D,

ON February 23rd, in a small private room of the Hospital which gave him his clinical training nearly fifty years ago and to which he had always returned an affectionate loyalty, there died, after a long illness bravely and philosophically borne, one who will be remembered by many who knew and loved him as " Stewart of Dulwich." His loss will bring grief to innumerable patients for there can seldom have been a kinder or wiser family physician or a better friend and counsellor. Generations of Dulwich boys and masters too will think of him with warm gratitude. There will not be one among the members of the Guy's Staff to whom he had occasion to bring patients in consultation during his long years of practice who will not look back on their meetings with him as privileged occasions. Whether young or old they must often have learned more than they could impart to him of unassuming clinical wisdom and been grateful for his sympathetic handling of every situation. The outbreak of war found him in his seventieth year and still in active work. The raids came and his own house was badly damaged, but it never occurred to him to leave the district. The disappearance of a large proportion of his patients notwithstanding he still had heavy duties owing to the departure of the younger men. Through all the discomforts and anxieties of the times and even when his health began to suffer he kept his serenity of spirit and allowed neither the weight of the years nor thought of self to influence his actions or demeanour. His student contemporary, close friend and partner of many years, Dr. Cecil Carpmael, another good Guy's man who will be affectionately remembered, died suddenly while he lay in hospital, adding both personal sorrow and concern for the destinies of the practice to his already heavy load.

His early boyhood was spent in South Africa and, even while his illness advanced and his symptoms told him that he had not long to live, he was happy alike to recall early memories and to discuss future policies for the rebuilding of a world he would not live to see.

He was educated at Cambridge, where he obtained a first-class in the Natural Sciences Tripos and then came to Guy's with an entrance scholarship, qualifying two years later. Thereafter he held the appointments of house physician and obstetric resident. He took his M.D. degree in 1897, and in the same year contributed an article to the Guy's Hospital Reports on " Abdominal Actinomycosis." He was Surgeon to the South-Eastern Hospital for Children, Sydenham, and Medical Officer to Dulwich College. He was a man of liberal thought and scientific outlook and was a keen naturalist and garden lover. He was tall and spare with a real nobility of feature and expression which even the changes of his illness failed to efface and of a strength and gentleness of character which called forth the very best in those around him. A deep sympathy is due to his wife and family in their great sorrow. His final peace was very surely earned.

Sector News

Pembury Letter

ONCE again the old order changeth and new faces for old have appeared in the mess. Geoffrey Reynolds has left us to take control of the I.M.S. Everyone was sorry to see him go and we wish him the best of luck and an uneventful voyage; no doubt he will find solace in the anticipation of a quiet reunion with and an unobtrusive welcome from Lieutenants Raymond and Tony. Perhaps even Major Pompo Harley will have some Mistah Ward-clerk coolies lined up on the quay loaded with good things and quinine to greet him.

David Vulliamy has journeyed forth into the Wildernesse to make new friends and to study the ætiology, symptoms, signs, treatment and complications of infective parotitis.

In their place we bid welcome to Geoffrey Lloyd and John Wilks, who have now settled in—one as a budding surgeon, the other as a rude doctor.

Hot on their tails come the convoys from London laden with seventeen stone of fat and bad veins, no doubt too heavy for the big City men's operating tables; piles of convalescent cases and *vice versa*. A new condition thus arises in the country surgeons—namely, the " mortification syndrome" or " Walter's rot."

The local Warship Week lasted seven days strangely enough, mainly due to persistent scrounging and the concert. The latter was staged entirely by the Hospital Staff, and was undoubtedly an enormous success as it ran for three nights. The Residents, the Nurses and members of the non-medical Staff all did their little bit.

Perhaps in the next concert the senior Medical and Nursing Staff will give stick to the Residents. No doubt Sister Opie will do an impersonation of Dr. Leedham and entitle it " Our New Radiographer."

G. E. Mc.

Correspondence

"VINESTHENE"

To the Editor of the GAZETTE.

SIR,—I should like to be allowed to supplement Dr. Marston's excellent account of vinesthene in your last issue by saying that this drug was first used at Guy's on February 3rd, 1934, when four patients were operated on by Mr. Simpson-Smith. It was used on many subsequent occasions, but owing to difficulty of supplies could not be released for general use. It was, like avertin and other new anæsthetics, placed at the disposal of the Joint Anæsthetics Committee of the Medical Research Council and the Royal Society of Medicine by their manufacturers. It is good to know that Messrs. May and Baker are producing vinesthene.

Yours, etc.,
FRANCIS E. SHIPWAY.

Shefford Woodlands,
nr. Newbury.

STUDENTS' UNION.

To the Editor of the GAZETTE.

SIR,—May I send you a short note in answer to a letter from Provisional Committee of the Guy's students in Tunbridge Wells appearing in your issue of February 21st, 1942.

As one of those closely concerned in the recent developments in medical student representation, I would like to state most emphatically that there is no substance whatever in several of the "terms" mentioned in that letter. Further, may I state that, amongst many others, we are concerned at this very moment with precisely those objections which the letter raises to the tentative B.M.A. scheme.

Finally, I would ask those who are at present critically inclined to stay their judgment pending the time when much more definite suggestions can be put forward. This should be possible in the course of a very few weeks, and I have the authority of the Deputy Secretary of the B.M.A. to state that, until that time, when all students will be consulted as to their opinions, no final conclusions will be made or conditions imposed. It will be for the students themselves to decide their course of action.

I am, etc.,
K. C. WILLETT,
General Secretary,
B.M.S.A. Memorandum Sub-Committee.

The Medical School,
Middlesex Hospital,
London, W.1.

To the Editor of the GAZETTE.

SIR,—The provisional committee of the Students' Union in Tunbridge Wells is now, of course, superseded by the elected committee. But the letter from the provisional committee in the last issue of the *Gazette* contains a misconception which we, as ex-members of the provisional committee, wish to put right.

Such information as we had then received suggested that a new national medical student organisation was to be set up in opposition to the already existing B.M.S.A. This is not so. Realising the importance of unity amongst medical students, the B.M.S.A. itself would dissolve in favour of this new organisation. The new organisation would be the only national medical student association. It would be independent of the N.U.S. and therefore acceptable to all medical students.

It would cooperate with the N.U.S. on student matters, such as vacation work, and with the B.M.A. on medical matters, especially with regard to the students' memorandum to the Medical Planning Commission. It would be free to affiliate to the N.U.S., the B.M.A., or both, if it wished.

Yours, etc.,
ALLAN S. DIXON,
N. G. NICHOLSON
(for the Provisional Committee).

Tunbridge Well,
Kent.

To the Editor of the GAZETTE.

SIR,—May we elucidate the position of the Guy's Students' Union in the formation of a national organisation of medical students?

A Guy's Students' Union, consisting of all the medical students at Guy's has been formed. They have elected a Students' Representative Council, which is composed of six members :—

London	T. L. T. Lewis.
Farnborough	P. Brangwin.
Pembury	J. Baker.
Tunbridge Wells Committee	Two representatives.
Hon. Secretary	D. L. Gullick.

This council met on Friday, February 20th, and came to conclusions which show that the views put forward in a letter in your last issue, from the provisional committee of the Tunbridge Wells Students' Union, were due to a misunderstanding of the facts. By further explanation we hope to correct any false impressions which may have been created by that letter.

The Students' Representative Council discussed the attitude of the students whom they represented to the formation of a national organisation of medical students. They were in complete agreement that Guy's should co-operate in the forming of such a national organisation, and that all the provincial schools should be asked to attend a meeting in London at the end of March to discuss the scheme with the London Medical Schools.

Accordingly the council chose two delegates to deputise for them at a meeting of London Medical Schools representatives the same evening and to support the above proposals.

Before coming to such conclusions the council agreed that it was important to realise that the proposed national organisation of medical students would be in no sense a rival to the present B.M.S.A. (the faculty sub-committee of the National Union of Students). Unless the national organisation were to count among its members all the provincial schools who are at present in the B.M.S.A. it would not be able to come into being; nor would the aim of the London medical schools be achieved—*i.e.*, the formation of a national organisation which would be fully representative of all medical students and therefore of their opinions.

The main fault with the B.M.S.A. so far has been that it is by no means representative, nor will it be while the majority of London Medical Schools refuse to join it.

It is possible that the proposed national organisation may affiliate itself to the B.M.A. for purposes of stability and for means of expression, while at the same time financing itself to maintain independence. If this organisation is formed in time it will be able to deal with the

preparation of a memorandum on the reform of the medical curriculum from British medical students, which is requested by the B.M.A. medical planning commission. The task of Guy's contribution to this memorandum is in the hands of the Students' Representative Council.

Yours, etc.,

D. L. GULLICK (Hon. Sec.)
T. L. T. LEWIS (Guy's)
(On behalf of the Students' Representative Council).

Guy's Hospital, S.E.1.

"SURGERY CARDS"

To the Editor of the GAZETTE.

SIR,—From the majority of out-patient departments to which surgery cards requesting diagnosis and treatment are sent an answer is received. The replies from some departments are consistently courteous and helpful; from others, less so. It is, however, the rare exception to receive a reply from the Ear, Nose and Throat Department, no matter how many times "P. R. D. and T" be underlined.

I am hoping, therefore, Sir, that this letter may come to the notice of those who teach in that Department, for it is discouraging to those who, wishing to learn, carefully fill in the cards and hear nothing further.

Yours, etc.,

W. G. CROSS.

Guy's Hospital, S.E.1.

CLUBS' UNION.

To the Editor of the GAZETTE.

SIR,—It would seem fitting at the present time, when the relationship between the newly formed Students' Union at Guy's and the Club Union is likely to arouse considerable interest amongst readers, to set out in brief the constitution and policy of the Clubs' Union since its formation just over fifty years ago.

It has been realised by the Clubs' Union Council that under the prevailing conditions there must be many students who, for one reason or another, have little idea of the many activities carried on by the Clubs' Union. This would apply particularly to those students in the Medical and Dental Schools at Tunbridge Wells, many of whom have probably never visited Guy's or the Clubs' Union Ground at Honor Oak Park. In the past such information was available in a small book, entitled "The Rules of the Clubs' Union and its Constituent Institutions," which was given to each subscriber on joining. This pamphlet is now, unfortunately, out of print and, for reasons of economy and owing to the many changes that are occurring from time to time under war conditions, it has been decided not to publish another at present.

Without this information it is impossible to judge the part that is now being played by the Clubs' Union in the athletic and social life at Guy's.

The amalgamation of the various clubs and societies that took place in 1891 was designed to further the interests of such bodies by mutual support and to simplify the collection of subscriptions.

By payment of the annual subscription any student was entitled to the following privileges:—

1. Membership of any of the constituent institutions.
2. The use of—
   (*a*) The Students' Club at Guy's, which included a dining-room, reading-room and smoking-room.
   (*b*) The Pavy gymnasium.
   (*c*) The pavilion and ground at Honor Oak Park (including free admission to all Rugby matches).
3. A copy of the *Guy's Hospital Gazette*.
4. Life Membership.—This was granted to any medical or dental student who joined the Union on entrance to the Hospital and who continued to be a subscribing member until the date he obtained a registrable qualification provided that he had paid three annual subscriptions.

Most of the above privileges still hold good though the old quarters of the Students' Club which were housed in the College have been destroyed by enemy action; and again, the Pavy Gymnasium is no longer in use, though excellent facilities are now available above the new squash courts at the back of the Medical School.

The Guy's Hospital Clubs' Union now consists of the following constituent institutions:—Association Football Club, Athletic Club, Cricket Club, Debating Society, Dental Society, *Gazette*, Golf Society, Hockey Club, Lawn Tennis Club, Pavy Gymnasium, Physical Society, Rifle Association, Rowing Club, Rugby Football Club, Sailing Club, Students' Club, Squash Club, Swimming Club.

In the past the affairs of the Union were managed by a Council consisting of six members of the Hospital and School Staff and six representatives of the Students, all of whom were elected annually.

When the evacuation of the Medical and Dental School to Tunbridge Wells took place and students in the clinical period were posted to Farnborough and Pembury as well as to Guy's, it was realised that the student representation on the Council was no longer satisfactory and it was decided to make the following alteration:—

> "The medical students at Guy's, the dental students at Guy's, the medical students at Farnborough, the medical students at Pembury, the resident medical students at Tunbridge Wells, the non-resident medical students at Tunbridge Wells, the dental students at Tunbridge Wells shall each send one representative to the Clubs' Union Council. Each representative shall be elected by a meeting of all students at each centre, and shall hold office for the period of one year provided that he is not moved to another area before the end of that period."

There is a general impression that the Union exists only for the benefit of those interested in some form of sport. This is not true. The Debating Society, Dental Society and the Physical Society all provide ample opportunities for those who are not athletically inclined.

It will be obvious that owing to the distribution of students over such a wide area it is impossible to provide all the facilities that were available in the past when the whole of the students' life was centred at Guy's. Unfortunately the excellent grounds and pavilion at Honor Oak Park are denied to those students at Pembury and Tunbridge Wells. It is essential that these should be maintained both for those who are now residing in or near London and, what is quite as important, for the period after the War when it is likely that the Medical and Dental Schools will return once more to Guy's. As a result new grounds had to be located and rented to serve the large body of students living in and around Tunbridge Wells. In general it may be said that the co-operation of the various sports clubs in Tonbridge and Tunbridge Wells has made it possible to do this, so that almost every club now running at Guy's is duplicated in Tunbridge Wells. Doubtless there is room for improvement and the Council is constantly giving the matter due consideration.

No mention has been made of the Students' Club, though this is, perhaps, the most important constituent body. At Guy's the Physical Laboratory has been converted into a common-room, where papers and periodicals are provided. The dining-room is now in the Pathology Building where excellent meals may be obtained and the efforts of the Catering Company in this direction have been much appreciated and duly recognised in a previous number of the *Gazette*. At Farnborough and Pembury papers and periodicals are provided in the students' premises and it is hoped that in the near future a club-room will be found in Tunbridge Wells to meet the requirements of the pre-clinical students billeted in the area.

It will have been noticed that the Clubs' Union balance-sheets for the past two years have not been published in the *Gazette* as was the custom. The Council have bowed to the expressed wishes of the Editors of the *Gazette* on this matter, who have been, and are, much concerned over the reduction in size of the *Gazette* owing to the paper shortage.

The balance-sheets for the years 1939-40 and 1940-41, are, however, available at the *Gazette* Office and the Medical School Office at Guy's; in Summerlands at Farnborough; in the students' hut at Pembury; and at Sherwood Park, Tunbridge Wells, although for purposes of economy copies will not be distributed to each member.

In conclusion I would like to point out that the Council have the students' interests very much at heart, and it is their wish to give financial aid to any and every activity which may desire it, though, of course, income will, as usual, determine expenditure. It may not, perhaps, be realised that the present annual subscription now stands at a guinea less than before the War.

I am, etc.,

C. S. DARKE,
Hon. Secretary, Guy's Hospital Clubs' Union.

Reviews

Medical Diseases of War. By SIR ARTHUR HURST. London: Edward Arnold & Co. 2nd Edition. 1941. Pp. 427. *Price* 18*s*.

THE reappearance of *Medical Diseases of War* as a modern successor to the original *Medical Diseases of the War* was welcomed in the *Gazette* last year. The necessity for a second edition so soon after the first is ample evidence of its well-deserved popularity. The opportunity has been taken to incorporate such new knowledge as has accrued from the first year of this war and, in addition, new chapters have been added dealing with meningococcal fever, amœbic dysentery, malaria and with digestive disorders in soldiers. The book has thereby been rendered more complete whilst remaining as excellent as before; it should certainly be read and digested by all who have the responsibility of treating either soldiers or civilians in wartime.

Sport

Rugby

GUY'S *v.* LONDON DISTRICT.

(*Played at the Athletic Ground, Richmond, on Saturday, February 7th.*)

IT is doubtful whether Guy's have played better this season than in this game. Their opponents included International, County, and Rugby League stars, but this did not worry Guy's, who were always the better side in every department of the game. Indeed, had London District not shifted Haydn Tanner from centre to fly-half to partner Maddocks, Guy's might easily have piled up a bigger score.

London District kicked off, but were sent back from a kick for offside. Lambert was collared in possession following a Guy's three-quarter movement, and another movement by Strathie, Brangwin and Gartrell kept Guy's on the attack. After seven minutes Lillywhite cut through with tremendous confidence almost to the line and passed to Strathie, who scored under the posts for Mullins to convert. Camp had a grand run, but as he passed the full-back somebody caught his ankle, and Gartrell followed with a run on the opposite wing but had no support. Guy's were awarded a penalty and Mullins kicked the goal.

Some pressure by London District was relieved by Lillywhite finding touch. Haydn Tanner broke through and his punt ahead was taken by Hodgson, who scored in an easy position for Smith to convert. A dribble by Charters was stopped by Lewis, and, following some interpassing between Camp and Strathie, London District drew level with a try by Juckes from a forward rush. Guy's covered well as their opponents' three-quarters handled all along the line; Strathie kicked ahead and Tanner called for a mark, but Lillywhite brought off another long touch kick.

Following a Guy's forward rush London District were penalised for not playing the ball and Mullins kicked number three. Scott sent Strathie a peach of a pass from a scrum, and swerving his way through, Strathie deceived the opposition by changing direction and touching down under the posts for Mullins to kick number four.

Three minutes after the interval Mullins missed a difficult penalty kick, and as London District attacked Lewis found touch. Matthews broke away, but unfortunately delayed his pass to Mullins, and London District had a nice three-quarter movement, but Gartrell forced Pickard into touch. Brangwin had the line at his mercy, but Lambert saved a certain try with a grand

tackle, and Haydn Tanner hung on to Camp like grim death to stop another try.

Guy's were constantly finding openings, but could not quite force home their attacks. Breen-Turner made an opening, but his pass was dropped and Pickard ran from his own " 25," only to be collared by Lewis. The ball reached Gartrell from a combined three-quarter movement and, although harassed, managed to force himself over for an unconverted try in the corner. Tanner made a dangerous run, but having no support was tackled close to Guy's line. London District set up a hot attack and Guy's were compelled to tackle fiercely to prevent a score. In the last minute Camp took a pass from Lewis and slipped through between two opponents to score under the posts for Mullins to kick his fifth goal.

It is only fair to say that throughout the game the ball came swiftly out of the scrum, Scott gave an excellent service, and Lillywhite, in grand form, played a really first-class game.

Score: Guy's, 3 goals, 2 penalty goals, 1 try (24 points); London District, 1 goal, 1 try (8 points).

Team.—T. L. T. Lewis; R. F. Camp. D. M. Strathie, P. L. Brangwin, P. C. Gartrell; W. H. Lillywhite, N. I. Scott; B. H. Wilshere, A. B. Lee, R. G. L. Brittain, A. G. Albers, J. R. C. Matthews, T. W. Renton, J. Breen-Turner, M. R. Mullins (captain).

Hospital Information, etc.

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Honours

D.S.C.

The late Surg.-Lieut. E. A. Spouse, R.N.V.R., M.B.E.

Casualties

Surg.-Lieut. E. A. Spouse, R.N.V.R., M.B.E., D.S.C., previously reported missing, now reported killed in action.

Marriages

EMBERSON—NICHOLLS.—On February 24th, 1942, at Christ Church, Hampstead, Surg.-Commander (D) T. G. a'Court Emberson, R.N., to Elizabeth Mary Nicholls (2nd Officer, W.R.N.S.), only daughter of Canon and Mrs. R. M. Nicholls, of St. Paul's Cathedral, Malta.

JOHNSON—HADDAKIN.—At St. Joseph's Church, Roehampton, on 7th March, 1942, Dr. Brian D. Johnson to Kathleen Mary Haddakin of York.

Births

DYKE.—On February 14th, 1942, at Fairholme Nursing Home, Coulsdon, Surrey, to Eleanor (née Walker), wife of Flight-Lieut. W. Robert Dyke, R.A.F.V.R.—a daughter.

Death

STEWART.—On February 23rd, 1942, at Guy's Hospital, Hugh Milton Stewart, M.A., M.D. (Cantab), aged seventy-two, of 113, Alleyn Park, Dulwich S.E.21.

EDS. { N.A.N. H.F.O.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *21st March* 1942 — *Number* 1400

PASSIM

IN this week's issue of the *Gazette* there is printed an authoritative pronouncement from the Medical School upon the subject of students registered under the Armed Forces Act. The question of the student and his duties relative to the Home Guard or other recognised Civil Defence Service has been a difficult one to solve and has given rise to considerable confusion. There was even at one time an apparent lack of uniformity in regard to the duties expected of the student by the controlling bodies of the different London medical schools. At the same time, the students themselves possessed no truly representative committee whereby their views could be clearly expressed. As a result, there has been considerable delay before any decisions could be arrived at and approved. However, it is now clearly laid down that for medical and dental students who have completed at least one year of clinical study and certainly for those in their final year of study, pressure of academic work and therefore their value to the profession takes precedence over their Home Guard or Civil Defence duties: exemption on these grounds can now be obtained by personal application, provided always that satisfactory progress is made in their studies.

▭

IT was recently pointed out in one of the daily papers that 18 per cent. of those who make appointments to attend Out-patients keep these. This, of course, is a mistake, for if it had been an accurate statement the scheme would have been dropped long ago.

Sister Bird, who first suggested the introduction of this system, tells us that only 18 per cent. of patients did not attend. Provisional figures for the last month show that there has been a further decrease of 2 per cent.

▭

THE Works Department has recently started repair works on one of the lifts in the Medical Block. We hope this means that the Governors contemplate opening the wards on the second floor. For various reasons the present accommodation of the medical wards in the York Clinic is unsatisfactory. Cubicles and private rooms throw an additional strain on the shortage of nursing staff and ward rounds are most unsatisfactory in view of the limited space.

A proposal to open the Light Department on Saturdays afternoon and Sunday mornings has been passed by the Governors. The scheme will be put in force shortly. It is intended entirely for the benefit of patients engaged in essential work, who then may receive treatment for various minor complaints in their spare time.

▭

A CORRESPONDENT in our last edition complains that the white cards with which patients are referred to Out-patients from the Front Surgery and which are commonly known as P.R.D. cards are not returned with diagnosis and treatment filled in to those who refer the case. This, of course, is a grave accusation, as these cards are of great value in the teaching of students. For the first time in his career the dresser on the Front Surgery is fully responsible for the diagnosis and disposal of patients, and it is important that he should be able to check up on his endeavours. But there are, of course, two aspects to the question. Undoubtedly a number of cards are, as our correspondent states, carefully filled in, but a large number of others are so inaccurate and casual that they do not encourage the recipient to reply. In addition, the filling in of cards takes time, and particularly in busy clinics such as that chosen as the target for this attack, it may interfere with the teaching of students present in the department and with the working of the appointment system. Lastly, it may be suggested to those who, with our correspondent, appear to have been hurt by the apparent negligence of their teachers, that it is easy enough for them to get the answer they want by looking up the patient's Out-patient letter at a later date.

▭

WE are pleased to congratulate Dr. R. L. Waterfield upon gaining the award of the Jackson-Gwilt Bronze Medal and Gift of the Royal Astronomical Society. This award is given for work upon Total Solar Eclipses and Astrophotography and is awarded once every three to five years.

The Better Half of Treatment

A Paper written for the Pupils' Physical Society (Farnborough), 22nd February, 1942, by John A. Ryle, M.D.

I.

IT is debatable whether diagnosis, prognosis or treatment should be considered the most difficult part of the doctor's task. Students, I believe, commonly consider that treatment is the hardest to learn and the least effectively taught. And so I have decided to talk to you this evening about treatment and, further, in spite of the difficulties of the subject, have selected that part of it concerning which lectures say little and the textbooks next to nothing. I have called this part, for reasons which will become apparent, " the better half " of treatment.

When we speak of a man's " better half " we do so, not merely sentimentally, but also with justice and reason. The male, let it be allowed, is the more powerful partner; more competent by common judgment and, through wider opportunity in the world of affairs; the technician, the actor—and not a little proud of his drama—on the stage of life; the fighter and protector, too. But where would he be without the wife, the mother, the sister and the daughter, those who feed and clothe him from infancy to old age, the home makers, the nurses and the early tutors? And what would be his incentive to act and to achieve without these as his colleagues and spectators to love and praise him? And what stronger influence is there in his civilisation and cultural development than his " better half "? Without her help behind the scenes he would, we shall surely agree, be a very incomplete and ineffectual person.

We can draw a close analogy in the matter of the treatment of the sick, for we see and acclaim on the forefront of the stage the drama and achievement of surgery, of blood transfusion and the specific remedies, the benefits won from scientifically balanced diets and the drugs that conquer pain, and always the restless impatient quest for other healing arts and crafts. All this we might call the " masculine " part of therapeutics. But in what a small proportion of the total stream of human problems are these things indicated and how limited their own value would become, even when they are indicated, lacking the quiet co-operation of what I shall call " the better half of treatment." It is a hard thing to comprehend—this better half, like a woman, but like a woman it is essential to the completion, the refinement and the full activation of the other half, of all the other therapeutic measures however potent and specific they may be. You cannot discover it in books. A little of it you can learn from your teachers, more still from older colleagues in practice, observing their example rather than attending to the spoken word. But for the most part, like the other kind of better half, you must woo and win it for yourselves. It is a gift derived from long experience and from the study, not of pharmacology and pathology, but of men and women and children. Its chief ingredient is human understanding. " Scientific " medicine has moved so fast and forged so many weapons for the objective study and treatment of disease that we are apt to forget that dis-ease (in its true clinical sense) and all the anxieties which it creates are subjective experiences and to be subjectively appreciated by us if our patients are to be helped to the fullest limit of our powers. I may be wrong, but I believe that medicine has lost something of recent years, and that close sympathy with patients is rarer than it used to be among doctors, students and nurses —not because they are innately more callous than their forbears, but because they have become so preoccupied with " treatments " as opposed to " Treatment " and particularly with the habit of " doing things " instead of thinking, that in the process they find less time to feel or imagine just what their patients are suffering or doubting. Unless they recover this lost faculty medicine itself will be in danger of developing a deficiency disease.

II.

How can I exemplify what I mean? Perhaps I can do it best by recording some passing observations on events and problems which are the outcome of the War or of its impacts on current medicine and surgery.

Picture to yourselves the resuscitation ward at Guy's on an air-raid night last winter. After the first errors of inexperience were overcome the admissions would usually proceed expeditiously, the stretchers would be lifted and carried with due care, the victims would be put to bed and their first wants quickly attended to. A little later the examination of wounds would start with appropriate system and manual gentleness. But then it was that the appearance of something wanting, something defective in the total management of the case declared itself to the watcher on the fringe. The crowd round the bed and the almost excited interest in injuries due to enemy action seen for the first time—this was natural and could be excused; the somewhat too concentrated attack

of dresser and surgeon and then the blood-pressure reader, the radiologist and the transfuser in quick succession, on an ill and exhausted patient but recently bedded and warmed, at times gave cause for concern; but the failure—not always but too often in evidence—to remember the whole patient and his mind and that the friendly encouraging word is an essential part of treatment in every injury or illness, slight or grave, but particularly so when the injury has been sustained in terrifying circumstances and when all the paraphernalia of examination, preparation and transfusion are conspiring to suggest the imminence of the knife and the uncertainty of the issue—this failure was much harder to condone.

What should the better half of treatment, the half that supplements and guides the purely physical measures and tempers their austerities to the patient, particularly include? It should include judgment, sympathy, explanation and reassurance. Judgment, not only as to what must be done—or not done—but as to when action should be taken and what preparations for it should be made and what difficulties must be anticipated, this is the most difficult of all the lessons, learned only with the years. Sympathy should be easier; it must be sympathy in manner as well as in the mind; it involves a genuine attempt to "feel" what the patient is suffering both in body and in thought. His eyes or expression may tell much or little. The initiative must usually be ours and a question or a word must show that we understand and are trying not only to do our best for the injury or the diseased part, but also to meet and amend the whole situation for the whole patient. "I know," we might say, "that you are feeling wretched and in pain now, but we shall soon have things going better. You are putting up a good fight. You've got a nasty wound, but we think we're going to save the limb and pull you through. We'll let your wife know how things are going and she shall come and see you in the morning." So in a single utterance the sympathy, the explanation and the reassurance can be combined, with small time expended and great comfort given. Are we justified, you may well ask, when the surgeon and the anæsthetist with scarcely a word to the patient can save a life or a limb, in laying so much stress on this vague so-called "better half" of treatment? Does it ever make the difference between life and death? That is something we cannot answer, but that it makes the difference between unspoken fear or anxiety and full confidence; between doubt in the outcome and faith that all will be for the best; between the expectation of death or crippling and the will to live and surmount disability we cannot doubt. For our charges are human beings, not "cases," and this must be remembered in all our conversations with or near them. Nor can we doubt that verbal help repeated and buttressed by look or gesture whenever necessary in the period of after-treatment assists the mechanical or medicinal part of every therapy. And anyway how can we allow anyone to go without what we ourselves would crave for if similarly placed?

III.

Let us move to a very different scene. Throughout the country there are numbers of service sick in E.M.S. hospitals, men with no "interesting" disease, but afflicted with a dyspepsia, "rheumatic pains," "bronchitis," or a psychoneurosis often manifest with cardiac or other physical symptoms. They are an important group from the man-power as well as the individual point of view. Early decisions, for them and for the Service, as to whether they are likely to become fit again and to make good soldiers are needed. Some of them would do well in industry or agriculture, but will never pull their weight in the field. Very few of them are malingerers. A few of them may have been too harshly treated in their units on suspicion that they were "putting it on a bit." Many of them are lonely or "fed up and far from home." In such conditions which of us would not be more conscious of his aches or pains or flatulence? Some need firmness. All need a reasoning sympathy and the nearest we can give them to a correct assessment of their case.

Especially for those who as yet lack experience of general practice and who have been brought up to the idea that admission to hospital means some fairly definite disease or pathology these cases are something of a problem. "How should they be investigated and how treated?" is the query in the mind.

Now here we come face to face with an unfortunate influence of current hospital teaching. If a diagnosis is not obvious we rush to "investigation"—magic word—and if that is negative we think of another investigation or invite a specialist opinion. And all this takes time and commonly leads nowhere. Meanwhile the patient lingers in despond and uncertainty. No one tells him what is the matter with him; often no one seems to know. He has little to do in the ward and his symptoms begin to stick or multiply instead of to abate. We are in the process of converting a temporary invalid into a chronic one. Medicine all the world over with certain prevalent types of case is not only failing to cure but actually manufacturing ill-health. Non-specific treatments for a non-specific disease will next, perhaps, be tried and often with little or no effect, so that the sense

of failure in patient and in doctor increases. Needless to say, the name of these cases in ordinary practice is legion, and there, instead of being "investigated," they are often given bottles of physic or certificates. Too rarely does the doctor (although, thank goodness, there are notable exceptions in every generation!) sit down and think about them or study their faces or put himself in their position, or enquire sufficiently into the background of their troubles or make a decisive statement or prescribe a definite programme or give a cheerful prognosis.

IV.

How should the "better half" of treatment help us here? In a large proportion of cases it could provide the whole answer and put the worse half out of court, but even if not fully successful in the relief of symptoms it could give the patient a conceit of himself once more, relieve him of the fear of heart or lung disease or of ulcers or appendicitis or of being crippled by rheumatism, and could win his confidence in our profession and let him realise that he would march or work again and enjoy life, even if he still had twinges or belchings from time to time.

What should the procedure be with these service cases or for that matter with their civilian cousins? A physiognomical assessment of type and temperament, an ordinary careful complete history and overhaul, a particular enquiry into recent bodily or emotional stress, and, in the absence of physical signs, an immediate reassurance, a simple explanation for the symptoms and a good prognosis; a restriction of "fags" in the over-smoking dyspeptic or victim of colon-pain or cough or cardiac neurosis; a job in the ward to help Sister; a few days of hardening exercises or walks and then back to duty with a "You'll soon be all right and mind you don't come back to us again." For many this will be enough and the tone of their "Thank you" will assure you that it is so. A few, of course, will need to be given a barium meal examination or to have their chests X-rayed and any negative finding should be emphasised at once and added to other reassurance. Some will be found unfit for further service. At all costs the prolonged stay in hospital, the waiting for boards, the indecisions, the multiplication of specialists or, in a teaching hospital, the inconclusive round without some clear statement or assurance at the end must be made as rare as possible. So, too, must the use of long words and silence or—as I heard one patient describe it—the habit which doctors have of "going away and whispering in corners." General, decisive and friendly management and not "investigations" and "treatments" is what so many patients the world over are waiting for.

One of the most refreshing things in medical practice is the sigh or expression of relief when, at the end of a long overhaul, one says to one's patient, whether drawing a bow at a venture or knowing full well what is wanted, "Well, there are no signs whatsoever of cancer, or of tuberculosis or heart-disease"—as the case may be. To be so emphatic means that we must be prepared to have the courage of our convictions, but this courage, I must admit, is not always readily acquired. Men lack conviction because they do not trust their senses or take good histories or learn to think in terms of the subjective and the probable and the reasonable, and think only of the objective and the rare or in terms of their own ultimate reputation, which might suffer from a diagnostic error, rather than of their patient's immediate need. If a man gives a five years' history of abdominal discomforts remaining true to type it will be a reasonable conviction that the symptoms are due neither to cancer nor appendicitis, and you should not haver, but say so frankly if you sense the slightest anxiety in his mind. Even when one is really in doubt and compelled to play for time or to arrange for necessary tests (for, needless to say, the accessory methods have great value), it is still possible and proper to give a provisional view and such reassurance as is needed to tide the patient over an anxious waiting phase. Doubt and waiting must be eliminated wherever possible. Remember, too, that odd symptoms, which would not at all disturb you, may suggest great evils to the lay mind. An elderly woman once came to me with a complaint of dry mouth. A complete overhaul revealed nothing amiss. I did not feel very hopeful of making a dry mouth moist and so began by saying, "Well, I am glad to be able to tell you that my examination is entirely reassuring. There are no signs whatsoever of cancer or anything of that kind." "Thank you, doctor; that's all I wanted to know," was the prompt reply. At no stage had a fear of cancer been hinted at and it rarely is even in the cases in which it has been most insistent. Sympathy, explanation, reassurance, and especially the reassurance of a good prognosis—these should be a part of every therapeutic system. But please remember, too, that psychological management is not the universal answer for every malady for which you cannot suggest another remedy.

And, alas, we cannot always reassure and must, in fact, remind ourselves at this point that there is another important group of cases in which the better half of treatment has an essential part to play. It is the group which includes the anxious, the hopeless and the dying cases. Here the atmo-

sphere which it is the doctor's duty to create for patient and relatives is, in conjunction with nursing care and the analgesic drugs, the mainstay of treatment. There is no case for which nothing can be done. There is no stage of a mortal disease, even up to the last moment of existence, in which small decisions and attentions may not bring some little help to the body or mind of the patient or to the minds of those who watch at the bedside. In doubtful issues the anxiety can often be offset by noting and emphasising the few more favourable signs.

V.

We find, therefore, that in a very large proportion of all diseases—that is to say, in that greatly preponderating list in which physical signs and evidences of infection are absent and the malady is dubbed " functional," the better half of treatment is, in fact, nearly the whole of treatment. Avoiding operations, applications and bottles of physic, it comforts, exhorts, explains, directs activity and modifies habit.

In acute and chronic organic disease the better half of treatment—while it cannot rival the life or limb-saving potency of the operation or specific remedy or the analgesia of the anæsthetic or the hypodermic injection—yet lends its aid to these, inspires confidence in the actions and decisions of those who employ them, helps the mind to help the body and in subtle ways achieves, like the woman in the home, more than the eye can see and more than men can guess.

In the so-called hopeless case the better half, that is to say the doctor's humane handling as distinct from his specific technique, employing kindness, adjudicating in the use of morphine, deciding how much should be told and when and how bad tidings should be broken, is rivalled only by the nurse; but then the ministrations of the nurse who unlike the doctor is continuously on duty are, in grave illnesses, the better half of the better half of treatment.

VI.

At this juncture you might well say to me, " But all you are advocating really is that we should be kind and use our commonsense." That is precisely what I am advocating, but, believe me, we all of us fail at times in the achievement of both of these ideals of conduct and some of us fail nearly all the time. Fatigue, anxiety and pressure of work do not assist their exercise. Were they easy there would be no occasion for this homily and little criticism of doctors. Nor must we forget that it is not always proper treatment to be kind. Firmness to the point of severity and rebuke is sometimes the essence of treatment. Hippocrates speaks of the necessity of performing actions in the sick-room " calmly and adroitly " and of giving orders " with cheerfulness and serenity," but sometimes also of " reproving sharply and emphatically " and of keeping " watch on the faults of the patients, which often, make them lie about the taking of things prescribed."

I am aware, looking back, that I have often been less kind than was proper and that there have been many occasions when my commonsense was not awake. There have also been occasions when I ought to have been more severe. But, to lighten a serious talk, let me tell you a story of a patient whom I once roundly rated and who thereupon insisted on paying me more than my fee.

He was a young millionaire, by inheritance, from across the ocean. He had never done a day's work in his life. He had seen three ear specialists in London for pains in his ears, one of whom found nothing and did nothing, while one prescribed some local treatment, and the third sent him on to me as a " general," rather than a " local," proposition. His complaint was of pains in his ears if he sat in a draught. He came into my consulting-room wrapped up with mufflers and wearing a heavy overcoat with an astrachan collar, although it was by no means a cold day. He also admitted to a Rolls-Royce with central heating. His symptoms did not at all suggest organic trouble. His whole make-up was that of a spoilt and indolent young man. I asked him how he occupied himself in life. He replied: " Wal, I finance my wife to breed Pekingese." I asked him how he amused himself and he said he went to the " movies," but always had to come out because of the draughts. I then gave him a most searching and elaborate overhaul, not omitting to examine his rectum as well as to look at his drum-heads. The examination complete I decided on an aggressive line of action, not without some trepidation, for he was a thick-set and " husky " fellow despite his soft living. I asked him if he would like me to tell him exactly what I thought of the situation and he said " Yes." I told him that I considered him as of less use to the world than his wife's smallest Pekingese; that the only thing likely to cure him would be to lose all his money and to have to work as a navvy; that his ears were normal and his symptoms due to his idleness, his foolish thoughts and self-protective habits. Then I stopped and asked if he wanted me to tell him any more. He " reckoned " I had said enough and also that it was " the first constructive policy anyone had given him," and insisted on leaving five instead of three guineas on my desk. I gave him no prescription, but I believe I gave him the better half of treatment—the rough edge in this instance of

its feminine tongue. I am sorry that I never heard whether the interview had any lasting effect upon him.

VII.

There are countless other components of the better half of treatment, and only a few of them can be mentioned here. They include a constant attention to detail such as the choice and arrangement of a sick-room, a variation in a tedious diet, the fluid intake, the decision as to whether or not a special nurse is necessary, a kindly consideration of the economic burdens of an illness, willingness to accept a lay suggestion (a patient of mine, for instance, obtained great temporary benefit from a change in my too tedious diet suggested by her dressmaker), and the adaptation of one's own mood or manner to meet particular frailties and circumstances. The gloomy doctor has mistaken his vocation. The over-breezy doctor helps many patients but irritates others.. You should never appear to be in a hurry over a visit or a consultation, however busy you may be; and, even in an influenza epidemic, make it a rule never to go into the sick-room wearing your overcoat, for this may well suggest that you have only got time to pop in and out again as a matter of form and are not really interested in the case.

I have intended no slight to the scientific or technical achievements of our profession. To have lived in the age of modern surgery and anæsthesia; to have witnessed the introduction of insulin and liver therapy and the sulphonamides, and seen the abolition of rickets by nutritional and hygienic reforms; to have watched the sores and the scars of syphilis become rarities—all this has been an immeasurable privilege and given us pride in human progress. Let us call these achievements, if you will, the grander half of treatment, certainly not the worse half, for such disapprobation is only earned when treatments are carelessly used, neglected or misapplied. But let us agree that our better half must never be allowed to lose its title, for it is compounded largely of reason and humane sentiment, and these, apart from the good that they can do immediately, help also to direct the rest of treatment. They help to find the happy mean between over- and under-treatment with physical agents, to correlate actions, and to put the spirit or soul into the body or mechanism of therapeutics as a whole. To learn all that reason and humane sentiment can or might do we should really become patients ourselves.

Like the better half of man the better half of treatment is elusive and not easily and never wholly understood. It is also endowed with her infinite variety. Both are great comforters of man in his distress. Neither with one nor the other can we possibly dispense.

Sector News

Guy's Letter

WITH amazing alacrity our turn for a contribution to the *Gazette* comes round, and, as usual, nothing of any moment seems to have happened since we last took to print.

Vic has been re-opened, re-shut and opened again and we now await with keen interest the bacteriologists' report of the findings on swabs taken from almost every orifice that Vic could offer. Whether or not the Staph. Aureus and his horrid little blisters will return we don't know, but a large number of people at Guy's and in the Borough sincerely hope that he won't.

With spring and the nesting season hard upon us there is a wealth of gossip to hand, but, remembering Gashmu, we are desisting. But don't, dear readers (or do I flatter myself) think that Guy's is unaware of the changing season.

Despite our limited number of beds we manage to keep busy, and if we do become short of operating material now and again—well, we just turn out the lights, and what with B.-D. looking down and Mr. Doherty looking up, and Mr. Wass with his eye to the back door—why, there's plenty of scope.

Sir Arthur Hurst has once again become a most important member of the medical teaching personnel. Apart from a weekly round, once a fortnight he stays and conducts a medical discussion in the Pathology Block dining room, after tea. One such meeting has already been held and was an unqualified success.

We hope that Sir Arthur realises how much his interest and enthusiasm is appreciated. His example could and should be followed.

H. A. R.

Farnborough Letter

WARMTH has come to Farnborough at last; not only have the snows outside melted in the spring sunshine, but coal has reappeared in the scuttles within—in fact, life

from a bodily point of view, is much more comfortable than when we last put pen to paper. Actually, it is no small privilege to put pen to paper, for paper is very scarce down here; fortunately the Editor is not fussy about what we write on, for he can turn our untidy script into elegant type before it reaches our distinguished readers, but we cannot help wondering what are the local doctors' reactions when they receive letters about their patients written on the backs of scraps of temperature-chart or on dainty but quite inappropriate tablets scrounged from Sister's private store, especially as the doctors must receive, often by the same mail, multi-coloured many-paged circulars from various drug-manufacturers. Presumably the drug-advertisers are given priority over hospitals in the allocation of paper.

The local branch of the Pupils' Physical Society has, under the leadership of H. C. Still, recently held three very successful meetings. One was a clinical meeting and the other two have been devoted to addresses. The first address was given by Professor Ryle on the "Better Half of Treatment"; this address stimulated a lively discussion, in which many of the large audience participated. For the second address by Mr. Layton on "Past Guy's Men," a departure from custom was made by inviting members of the nursing staff to be present. Mr. Layton, with his inimitable gift for digression, imparted a vast amount of information in a palatable form and kept everyone in high spirits throughout the evening.

The Home Guard in this area have secured a notable recruit and the appearance of Dr. Forman, in battle-dress, has now become a regular feature of week-ends here; however, the story that he is being sent to an O.C.T.U. is, we are assured, without foundation. Another uniformed visitor who caused no small flutter in some quarters was Mr. Rowlett, fresh from Aldershot and all ready for service with the I.M.S. We extend to him and to Mr. Hallam, who leaves with him, our best wishes, and hope to hear something later of their experiences.

Those who like dancing have had two opportunities at least during the last month to indulge their taste—one at Hevers Wood roadhouse and the other at the "Bell." The former, as it was sponsored by the Massage Department, will probably be reported by our Orpington contemporary; the only person who has told us anything about it is one of our colleagues who lost his overcoat there, so perhaps we had better not repeat what he said. Our informant regarding the dance at the "Bell" was less voluble, but said that she and everyone she met there enjoyed it immensely.

V. C.

Tunbridge Wells Letter

IN common with Pembury Hospital we have had an extremely successful Warships Week, and may, I think, give ourselves a hearty thump on the back for collecting the phenomenal sum of £101, wheedled from many a refractory pocket. Most of the credit, I feel, is due to one or two individuals without whose untiring energy and uncanny nose for money, we should have attained, if at all, but a dismal figure.

A good deal of excitement was caused amongst the inhabitants of this "Royal borough," when they witnessed the extraordinary sight of a ceremonial parade, to mark the opening of their Warships Week. Nine worthy martyrs from our Home Guard volunteered (or were commandeered) to carry their rifles at the "slope" along the three-mile route, whilst other less worthy "martyrs" stood around and ogled at them.

Now that the weather seems to have changed for the better one may walk about with impunity so far as snowballing is concerned; but Spring brings its diseases, and this time it is a mental one and we return to 1066 A.D. It appears that somebody, not content with possessing a rifle and other weapons of war, had the bellicose idea of making a bow—and arrows! The disease has since spread, with the result that sooner or later one of these deadly archers will almost fulfil Shakespeare's immortal words concerning young men, and pay the capital price for not being a genuine Cupid.

It has been remarked by some that now we are well established here in Tunbridge Wells it would be a good thing to try and revive a few more of the various societies and clubs which have long since ceased to function. There have, in spite of Home Guard distractions, been some moves made in this direction. For instance, a number of really excellent gramophone recitals have been given, involving a gradually augmenting audience. The unique activity of some members of a would-be sailing club must, I think, be recorded. Assembling in the Anatomy Lecture Room at Sherwood Park they eagerly awaited the commencement of the official meeting, only to discover, after sacrificing the best—the coffee—part of a Saturday morning that the discussion had been called at a similarly-named apartment in London!

J. G. P. H.

Correspondence

"AUDI ALTERAM PARTEM"

To the Editor of the GAZETTE.

SIR,—It is twenty years since the late Dr. Poulton introduced the P.R.D. convention, and I have tried to play to it. I am sure Mr. Mollison and Mr. Cann have done the same. From time to time I have failed; but, until I read my *Gazette* this evening, I had no idea that I was in a period of lapse. Our department is organised for six dressers, or eight at most. Now we have sixteen. Our duty is equally divided between our patients and these dressers. To care for the former, and to teach the latter, must come first. I will see what can be done about the P.R.D. cards; but think the dressers in the surgery must rely upon their fellow students to fill in the conclusions to which I and my assistants come, so long as we have these big firms.

The "T" has slipped in at some unknown period. It was not a part of Dr. Poulton's scheme as brought before the medical committee. It does not adapt itself to a terse reply, which may imply a dogma foreign to the teaching of Guy's. I can give no promise to send one regularly.

The letters P.R.D. mean "Please *Return* Diagnosis.' They infer that the dresser in the surgery has attempted a provisional diagnosis. Of recent years many cards have come through without this being entered. I have never answered these.

I think it would have been more courteous had Mr. Cross come and spoken to me and to Mr. Cann before writing to you. He has been my dresser, and should know me; nor have I ever heard of anyone who feared to approach Mr. Cann. The practice of putting seniors in the pillory, without enquiry, has become regrettably common. Blatant examples have happened since the outbreak of war. I think it ought to cease. I doubt whether there is any hospital or school in which enquiry and criticism from juniors when reasonably and politely put forth is so freely met and invited by the Staff as at Guy's.

Yours, etc.,

T. B. LAYTON,

Senior Surgeon, Ear Nose and Throat Department.

Guy's Hospital, S.E.1.

CLUBS' UNION.

To the Editor of the GAZETTE.

SIR,—The hon. secretary of the Clubs' Union, in his review of the facilities provided by the Students' Club, states: "At Guy's the Physical Laboratory has been converted into a common room, where papers and periodicals are provided."

Last week, on visiting this common-room for the hundred or more students at Guy's, I made the following observations:

In the way of furniture there are five armchairs, including two wicker ones without seats, half-a-dozen upright chairs and one table suitable for writing at. The blackout is left up all day, and rather less than 50 per cent. of the lamps now possess bulbs. I have yet to see a newspaper or a periodical in the place. So far from being converted into a common-room, the Physics Laboratory now has the appearance of a lumber-room for salvage.

Surely this place could be made habitable by rectifying these faults and by the addition of an electric fire and, perhaps, even a carpet. In this case people might actually go and sit there and so help to reduce the congestion in the "Spit" at lunch-time.

I am, etc.,

PETER N. CARDEW.

9, Hilda Vale Road,
Farnborough, Kent.

STUDENTS' UNION.

To the Editor of the GAZETTE.

SIR,—There has been much discussion in the *Gazette* concerning the relative merits of various national organisations of medical students, and we, as the elected representatives of 250 Guy's medical and dental students wish to make our position clear in this matter, especially with reference to a letter purporting to be "on behalf of the Student Representative Council" published in your last issue.

Before we may say what national organisation we desire, it is obvious we must first state what tasks we wish the All-Guy's Students' Union to undertake. We feel, when this has been clearly done, the necessity will become obvious for the collaboration of all dental and medical students in this matter both in Guy's itself and on the new national organisation.

No union of all Guy's students could profitably be formed at the present time unless it gave expression to the wishes of all medical and dental students—namely, that of increasing their contribution to the war effort. We realise in this connection that we are reserved to do our medical and dental studies, which is our prime war work, and with this in view the discussion of the curriculum must come first. But this by itself is not sufficient, and we have already down here devised several schemes for making a more direct contribution. We have set up a National Service Committee which raised over £100 in Tunbridge Wells Warships Week, organised a collection of books for the Forces and also a scrap-metal collection, and have many ideas for the future.

We feel it is the task of the Union to extend medical education beyond the boundaries of the curriculum, to encourage the activities of Physiological and like societies and to arrange for discussions on cultural subjects.

In all these activities, in the debating and dramatic societies, it is necessary to enlist the assistance of the teaching and nursing staffs whom we have always found most willing to help.

It is clear that to carry out these tasks effectively a functioning student committee must be elected in each Sector at regular intervals by the students themselves who must see that those who represent them best are elected.

On the question of a national organisation we feel the usefulness of such an organisation becomes clearer in relation to the co-ordination of the programme outlined above. It is quite clear that such a body would have important student tasks (such as war work, agricultural camps, etc.) to undertake about which it must consult with the N.U.S., which has much experience in these matters; it has also equally important tasks (such as the discussion of the curriculum), which it must successfully accomplish in collaboration with the B.M.A. and the Royal Colleges of Surgeons and Physicians.

Unfortunately there has been an over-emphasis on the question of the affiliation of this new independent organisation to some other body in much of your correspondence. In our opinion the main task is to set up this national organisation, get it going, and leave the affiliating till later. What we can most profitably do now is not discuss the relative merits of the B.M.A. or N.U.S., but decide what tasks we are going to ask this united organisation of all medical and dental students to do for us.

Yours, etc.,

P. A. L. CHAPPLE.

pp. P. C. S. CAMPION, Dental Conjoint Delegate; G. A. MORANT, R. J. HART, A. J. BRIDGE, Dental Delegates; F. A. ARNOLD, A. S. DIXON, J. MURPHY, 2nd M.B. Delegates; L. J. EVERED, P. A. L. CHAPPLE, 1st M.B. Delegates (the Students' Representative Council, Tunbridge Wells).

3, Sandrock Road,
Tunbridge Wells.

SAILING CLUB.

To the Editor of the GAZETTE.

SIR,—A meeting of the Guy's Hospital Sailing Club was held on March 14th at Guy's.

Mr. Erskine was elected and kindly consented to be Acting Commodore.

The activity of the club is being revived and sailing is now possible on the Thames at Hammersmith from the London Corinthian Sailing Club, where the Hospital dinghies are moored. Racing in conjunction with the L.C.S.C. takes place most week-ends.

Negotiations are proceeding for a possible grant towards the subscriptions for membership of the L.C.S.C. for a certain number of active members.

Those people interested in sailing should get in touch with me and I will be only too willing to give them further information.

Yours, etc.,

J. D. EVERALL, Hon. Sec.

Guy's Hospital, S.E.1.

Reviews

The Collected papers of Wilfred Trotter, F.R.S. Published by the Oxford University Press. London: Humphrey Milford, 1941. Pp. 194. 10*s.* 6*d.*

IN reviewing this book one is tempted to quote; but, to do so, would result in copying out the whole of it, for every sentence is so pregnant with thought and so well expressed that you know that you have never yet said and never will say anything half so good or half so well. Therefore let us not quote at all. The first of these essays on "Emergency" is, perhaps, the best paper on everyday practical surgery that has ever been written. Every student should read it weekly during his first appointment; he should re-read it every three months till he is qualified; it will do him no harm to learn it by heart. I would rather a fellow sat for his final after having done so, than after having attended many of the courses of instruction in diseases of the nose, throat and ear on which candidates are signed up to-day. When a man has qualified and is beginning to consider whether he shall make surgery his life's work there are two papers which may incline him to do so—"The Insulation of the Nervous System" and the "Functions of the Human Skull." Each of these show how Mr. Trotter can start from the widest principles and narrow them down to the practical details of some everyday task. They exemplify his greatness as a surgical teacher which lay in the fact that he was as illuminating on matters of minor surgery of a general nature as he was in a highly developed limited specialty. In the major surgery of the neck he founded a school in which he was *facile princeps*, but he was just as good on the arrest of bleeding from the nose or on the treatment of glands in the neck. If there be any teacher of surgery who thinks that he can set right the curriculum let him, in all humility, read Mr. Trotter's address on "Art and Science in Medicine" and learn therefrom what it is his job to instil into his students. So far I have mentioned only those papers which may be described as the more practical ones. Of Mr. Trotter as an historian of surgery, as a teacher of "the theory of medical knowledge," and as a philosopher there are examples in this book, and in every one of them there may be found matters of practical value to every surgeon, to every teacher, and, I believe, to every member of the medical profession.

Mr. Trotter was, in my opinion, the greatest member of our profession of this century, equal even to Lister. Neither of these men attained to the position that they held because of what they did. It was what they were. Into the voice of those that remember Lister there comes still a more earnest tone when his name is mentioned. So also with Trotter. You could not be in his presence for ten minutes without being uplifted. One remark would send you back to reconsider views that you had been developing for years. Another would open your eyes to new ideas on a subject quite different from that which had given rise to it.

He had a keen sense of humour and a biting tongue; but he used neither of these to be unkind. Students of University College Hospital have many stories to tell of him—they should be collecting Trotterisms—but I have yet to hear of an occasion when a reproof left behind any unkind feeling.

Those of us who knew him even slightly may appreciate this book the more because we hear

him speaking in the quiet voice with modulations that were but slight but were enough to bring out the meaning of his perfect English. I shall never forget his first paper on malignant disease of the upper respiratory tract at the Medical Society in 1909, with Mr. Charters Symonds in the chair. It took him just ten minutes to read, but at the end there was silence; it had been so complete there was no more. I do not think it is wrong to say that that ten minutes put him into the forefront of London surgeons. He was a young man, though even then his hair was steel-grey, who had just been put on the staff of University College Hospital and was known before he read his paper only to his colleagues. Perhaps even all of these did not know that he was also a philosopher, deeply read in all branches of that subject, who had already published two essays in the *Sociological Review* which were to form the first parts of " The Instincts of the Herd in Peace and War " that he published in 1915. There are but few surgeons whose names go down to posterity. That of Wilfred Trotter will probably be one of them. Undoubtedly his influence, which was always for the good, will do so through those who knew him intimately or slightly.

Hospital Information, etc.

STUDENTS REGISTERED UNDER THE ARMED FORCES ACTS.

The Ministry of Labour lay down in their form N.S. 181 that the continuance of reservation of a student from Military Service is subject to the Department receiving at intervals confirmation—(1) that he is making satisfactory progress in his studies; and (2) that he is a member of a Senior Training or an Air Training Corps. They also state that at their discretion they will grant exemption from (2) on the recommendation of the Head of the School on the grounds :—

(*a*) That the student is a part-time member of the Home Guard, the Royal Observer Corps or the Civil Defence Service (*see* list below).

(*b*) severe pressure of academic work, including that imposed on medical and dental students in the *Clinical* stages of their course.

(*c*) other exceptional circumstances.

Students in the Pre-Clinical Period.—It is therefore a legal obligation on all students in the Pre-Clinical Period, if they are not members of a Senior Training Corps or an Air Training Corps, to join the Home Guard, the Royal Observer Corps or a Civil Defence Service (excluding fire watching).

Students in the Clinial Period.—The School Council have given careful consideration to the position of students in the Clinical Period. They do not consider that students should claim exemption from (*a*) (above) on the grounds of severe pressure of academic work during the first half of their clinical period. They are, however, prepared to recommend to the Ministry of Labour exemption from (2) for students who have completed their first year of clinical study and who make a personal application for exemption on these grounds.

In order that form N.S. 181 may be completed and returned to the Ministry of Labour all students in the Pre-Clinical and first year of the Clinical Period registered under the Armed Forces Act, who are not already members of a Senior Training Corps or Air Training Corps, must immediately obtain exemption by becoming part-time members of the Home Guard, the Royal Observer Corps, or the Civil Defence Services (excluding fire watching).

They must notify the Medical School Office by 31st March, 1942, which service they have joined.

Students who have completed the st year of the Clinical Period and who wish to claim emption on the grounds of severe pressure of academic work must make application to the Medical School Office by *31st March*, 1942. Failure to notify the Medical School Office by this date will jeopardise the retention of the student in his reserved occupation.

Recognised Civil Defence Services.—

Controlled by County Councils and County Boroughs (in Scotland, County Councils and Large Burghs).

Air Raid Wardens.
Rescue Parties.
Decontamination Squads.
Report and Control Centres.
Casualty Services (First Aid Parties, Ambulances and First Aid Posts).
Messengers.

Controlled by Fire Service Department, Home Office.

National Fire Service.

Controlled by Chief Officers of Police.

Special Constables.

Marriages

EVANS—GROOM.—On March 9th, 1942, at Greenwich, Dr. Michael L. Hudson Evans, youngest son of Dr. and Mrs. F. Hudson Evans, of Lewisham, S.E.13, to Winifred, youngest daughter of Mr. and Mrs. W. M. Groom, of Carlton Crescent, Luton.

Reported Missing

We regret to record that information has been received that Captain J. L. Badgett and Captain C. H. James, A.D. Corps, have been posted as missing.

Deaths

BENT.—On March 8th, 1942, suddenly, at 6, Ravenslea Road, S.W.12, Sidney Charles Henry Bent, M.D., aged sixty-three years.

FURSE.—On March 11th, 1942, suddenly, Frank Leonard Furse, L.D.S., R.C.S. (Eng.)., aged 54.

ROWELL.—On February 28th, 1942, at The Shrubberies, West Rudham, Norfolk, Lieut.-Col. H. Ellis Rowell, M.D., T.D.

BATCHELOR.—On 11th March, 1942, at Dunedin, New Zealand, Ferdinand Stanley Batchelor, F.R.C.S.

EDS. { N.A.N. H.F.O.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *4th April 1942* — *Number 1401*

PASSIM

SIR JOHN ANDERSON recently defined the position of the civil population in an invasion. He said, in effect, that mass resistance to the enemy, not passivity, would be our defence. Whether invasion comes as an attempt to conquer Britain, or as a great raiding expedition to destroy our factories, disrupt our communications, dismay our people and delay our offensive in the West, it is not our business to discuss; but our preparations here, in Guy's, must be re-examined lest there has been dulling and staling during the eighteen months in which the threat has been repeated so often.

Sir J. Anderson said that provisions will be made for those men who are unable to train but would like to be armed. The position is still vague. Meanwhile everyone in Guy's who can use a rifle should be encouraged to practise. Those who cannot should learn. Before the War there was a flourishing shooting club, and it may be able to provide rifles; if not, there must be people who have .22 rifles, and they should lend them. With the help of the works department a ward in the surgical block could be turned into a miniature range. There are many details to be worked out, but they are not insoluble. A small charge for five or ten rounds would quickly cover the initial costs and provide money for a gift to the Hospital and a weekly prize for the best marksman (or woman).

The Home Guard question has been settled to everyone's satisfaction, but, so far, the exempted students have not been told what to do if an emergency arises. There is no time to waste; it should be possible to make provisional arrangements for the hundred students concerned in a few days, and to modify the scheme by consulting the Guy's members of the Students' Union.

▭

FOR over a year Senior Dressers have done their own clerking and carrying. Without the lifts this has been heavy work, just how heavy only those who have man-handled a fourteen-stoner up to Addison landing know. It is an unpleasant job; the dressers have not complained because they understand that war makes it necessary; but a chronic shortage of theatre trolleys has been a constant irritation to each successive group of Senior Dressers. The number of these trolleys at present in the Hospital seems to be eighteen. Fifteen of these are either in use or kept ready for use in the Front Surgery, Out-patients and the Gas Decontamination Centre. This leaves three for theatres, but because at least one trolley must be kept on the Addison landing to receive patients carried up the stairs, only two can be used. These two trolleys must, therefore, serve five operating tables, take patients to X-ray and sometimes over to York House. The result is a bottleneck which causes a lot of unnecessary trouble and annoyance throughout the Hospital. The dressers waste their time scrounging trollies; those who already have them are loth to part from such precious things lest they themselves should be caught in the same invidious position; the theatres and surgical staff suffer the inevitable delays and, in an emergency, the patients might suffer, too. It is hard to get trollies; it may be impossible; but when every effort has been made by broadcast appeals to manufacturers and to other hospitals to get them then trollies must be made in the Hospital. These home-made ones may be inelegant and even inefficient, but they can be used to replace the five trollies in the Gas Decontamination Centre, which least of all requires good trollies. The temptation to reduce the number of trollies in Front Surgery should be resisted; in the past any serious accident involving many people has needed every one of them, and even if the optimists believe the blitz has gone for ever they will not deny that rail or road crashes may happen at any time.

▭

WHY has the lively clamour of the Debating Society been silent for so long? Before the War there were many vigorous meetings in the old subterraneous spit and there was furious swashing and blackguarding between the aspiring dialecticians. The debate upon a National Dental Service showed how needful it is that men should have to speak in public and strain their turbid thoughts through the filter of speech. The Students' Union should ask the President, Mr. Layton, if he would start the resuscitation of this excellent society by presiding over a debate upon some subject so controversial that the disputatious may have their fill of cut, thrust and bludgeon, and instruction and entertainment be provided for all who care to come.

Surgical Amputations and Fitting of Artificial Limbs

By A. W. J. Craft, Esq., M.R.C.S., L.R.C.P.

GENTLEMEN, — May I, before commencing this talk to-day, express to the Ministry of Pensions my indebtedness to them for allowing me to place before you the experience of their surgical, medical and technical officers. This has been gained from the observation of thousands of cases since the Great War.

Amputations have been recorded in many surgical journals over a number of years and since the days of aseptic surgery the types and levels of operative work have varied greatly. In many cases they have presented a difficult problem for those called upon to supply a suitable and serviceable limb.

It is said that a good limb-maker can, or should be able to, make an artificial limb to suit any type of stump provided by the surgeon. This is quite true, *but* there are only certain amputations which provide a stump which is long lived and affords the patient freedom from further surgical attention.

When an amputation is carried out it begins a completely new period in the life of the patient. There are the following main objects in this new life which a surgeon, and the limb-fitter who follows up the work, is called upon to consider :—

1. To provide a stump which will not need further surgical attention.
2. To provide a stump which can be fitted with a normal type of artificial limb with which the patient can walk in comfort, in the case of a leg, or can use comfortably and with some skill if an arm.
3. To ensure that the patient can return to his or her " pre-amputation " occupation, or take up another, with as little discomfort and disablement as possible and not be considered a cripple.

Speaking generally, surgeons have not been able to follow up closely the results of their amputations. Once the operative wound is healed the patient obtains an artificial limb and he endeavours to carry on with his work. If the stump breaks down a local doctor is consulted; the surgeon who carried out the primary operation is seldom notified or allowed to examine the stump.

During the latter part of the Great War and the years following, the Ministry of Pensions set up an organisation throughout the country to maintain the artificial limbs which the Government had supplied to the Service casualties; and, what was far more important, arranged that the stumps of these men should be periodically examined. Records were carefully kept of these results and upon this experience the following data is based.

Definite evidence was produced, at variance with a great deal of past surgical teaching and, unfortunately, with some present text-book principles. The surgeon's primary object when amputating is to remove damaged and diseased tissues and produce a good stump from a prosthetic point of view. To do this the following considerations have to be made.

ABOVE-KNEE AMPUTATIONS.

1. *Weight Bearing.*—Nature devised that the weight of the body should be borne on the foot when walking or standing and upon the ischial tuberosity when sitting. If the foot, or part of the leg, is amputated there can be no question where the weight should be borne. Up to twenty years ago the majority of cases took the weight on the end of the stump. Within five years over 75 per cent. of theses were corrected and the weight taken on the ischial tuberosity. Many had a re-amputation. Now one seldom finds a single such case of end bearing weight.

The socket, made of metal or of wood, is carefully shaped for the ischial tuberosity to sit on the inner edge and thus the patient " sits " in his limb. As the patient walks he lifts the stump slightly in and out of the socket, causing a form of piston action with the stump. This is not detrimental unless the scar is terminal and adherent to the end of the femur.

2. *Musculature.*—When an amputee is standing normally with an artificial limb, the Adductor and Abductor muscles are used to maintain his balance. The adductors guide the stump to the mid-line of the body if the ischial tuberosity sits correctly on the rim of the socket. When walking the flexor muscles of the thigh lift the stump and socket, bending the knee and throwing the lower part of the artificial leg forward as in normal walking. On proceeding with this step the heel touches the ground and the extensor muscles of the thigh extend the stump and press it against the inner posterior surface of the socket, holding the artificial limb straight whilst the natural leg is brought forward. The four diagrams illustrate this *stump control.*

This demonstrates the fact that the adductors and abductors are extremely important and that as much of these as is possible should be left in the stump.

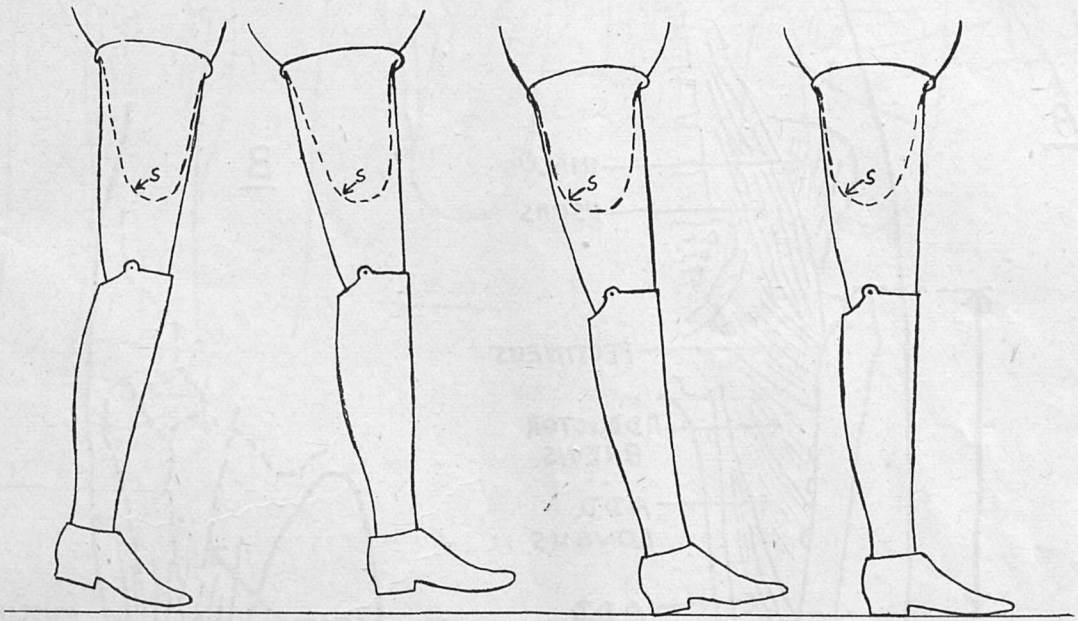
3. *Length of Stump.*—The experience of the

past twenty years definitely shows that the ideal length of an above-knee stump should be between 10–12 inches for the normal adult. This is measured from the tip of the greater trochanter to end of the amputated femur. A stump of this length hardly ever breaks down from circulatory failure or other causes, except, of course, direct trauma. Prosthetically and surgically it is ideal will be no adhesions to the scar-tissue and muscle extremities.

6. *Sciatic Nerve.*—Various treatments have been indicated in textbooks and again our records show how these have caused a very great deal of pain to patients and in a great number of cases the "phantom foot." It does not require traction or crushing and a ligature is not often necessary. It should be severed sufficiently far away from the scar to prevent any possibility of an adhesion.

Treat it with the utmost care and avoid any trauma.

Diagram 1



Stump "lifting" and pressing anterior face on socket.

2nd stage with anterior face still against socket.

3rd stage with posterior surface against socket scar is free.

Standing with posterior surface against socket, also scar free from pressure.

and most of the above muscles are left; only a part of the adductor magnus being cut away. A longer stump is a handicap and disadvantage in every way to the patient who will not be able to have a limb with the mechanical fitments of one fitted to the ideal stump.

4. *Scar.*—With the ideal stump there is an ideal site for the scar. It is formed by the longer anterior flap method giving a resultant consolidated scar which is transverse, posterior and about 1½ inches from the end of the stump. There are many reasons for this site, but time precludes giving these in detail. The chief is that in this position it does not become irritated or abraded when walking. This is indicated in Diagram 1.

5. *Flap.*—The flap should only contain sufficient tissue to maintain its own nourishment. Any superfluous tissue is a hindrance to good limb-fitting and a discomfort to the patient. The hamstring muscles should be cut so that they are one inch above the resultant scar and thus there

7. *General.*—Complete hæmostasis must be ensured because the formation of a hæmatoma, when evacuated, leaves a loose portion of tissue. This usually occurs at the "corner" of the stump —at the end of the lateral scar—and may later have to be removed.

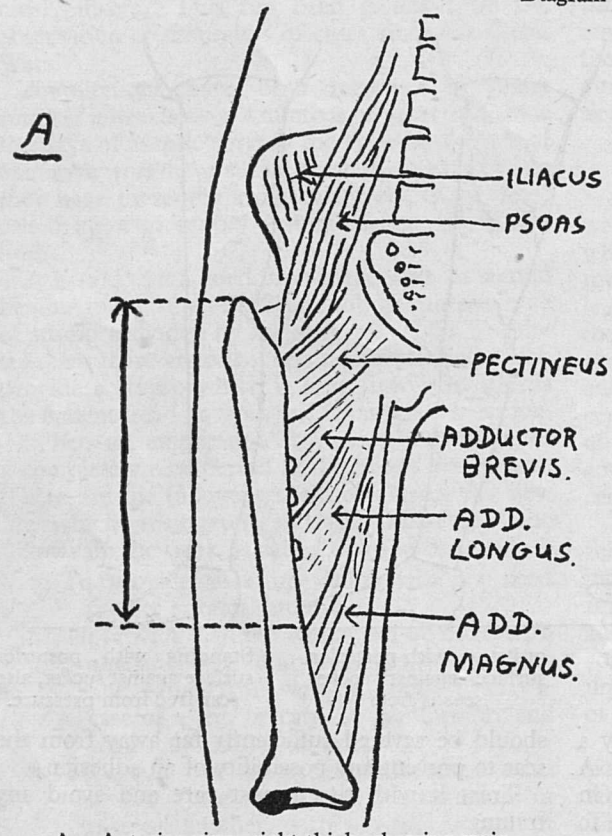
STUMP TREATMENT.

The preparation of the stump for limb wearing is very important indeed, and should begin from the time the patient leaves the operating table. Firmer application of the dressings *over the end* of the amputated stump are now being applied with great success. An above-knee stump should not be supported upon a pillow or sand bag in the bed. Allow the stump to rest on the same level as the opposite leg, otherwise flexion is started

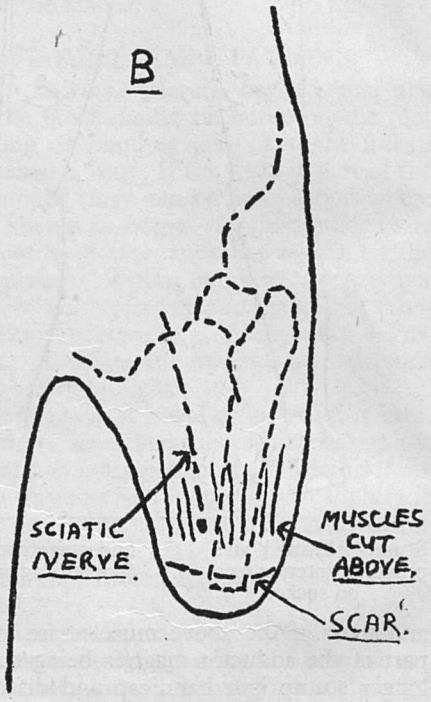
which is often very difficult to reduce afterwards. When the stitches and dressings are removed the patient should be encouraged to exercise the shortened muscles and movements of his hip joint.

In the past a great number of patients have been supplied with a plaster pylon—a temporary walking leg—which it has been claimed assists in reducing the œdema. It is by no means as successful as

Diagram 2



A.—Anterior view, right thigh, showing main musculature.



B.—Posterior view of ideal stump.

claimed and, in addition, gives the patient the circumductory movement of the stump which again takes a very long time to eradicate, some cases being unable to overcome it at all. Considering the time taken in making the pylon together with the time required for it to be worn for any reduction of œdema, it is now replaced by *crepe bandaging*. This is the most satisfactory, quickest and rational method in reducing œdema.

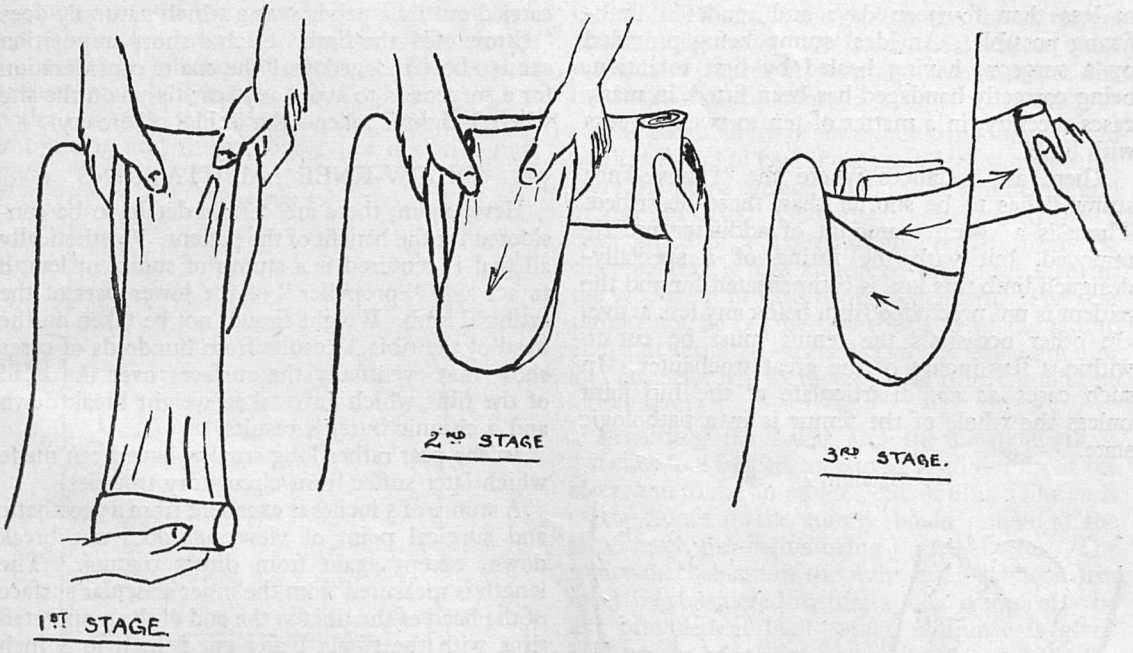
It has been possible to give this demonstration of the method of application, through the kindness of this patient here before you to-day. Diagrams are appended to illustrate the method.

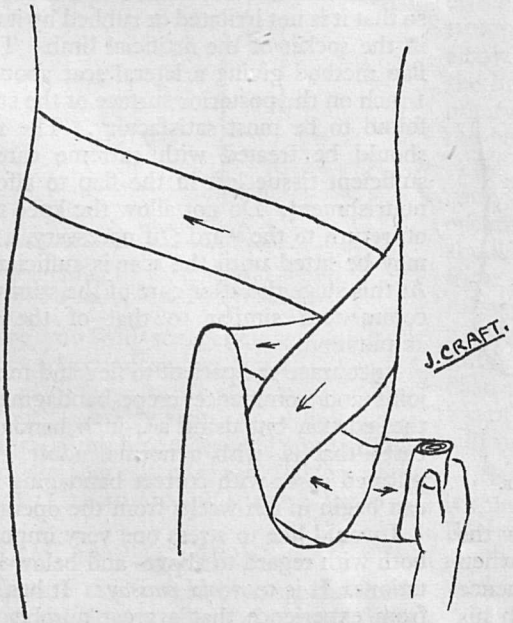
Two 6-inch crepe bandages are sewn together to make one long one. An extremely important point is that the bandage is rolled tightly and firmly, as will be seen upon examining this bandage, which I would ask all of you to compare with the other loosely rolled specimen.

Bandaging is begun by applying the end on the anterior surface of the stump, as seen, and it being held in position by the patient. Take it down the anterior surface under the end of the stump and pull it tightly up the posterior surface, where it is again held by the patient. Repeat this three times so that there is a triple sling supporting the loose tissues of the stump end. The bandage is now applied round the upper part of the stump, tightly enough to hold the slings and release the patient's hands. Continue with applications round the end of the stump very tightly to compress the tissues, and support the stump itself. Complete the bandaging round the waist and the stump end as shown, and illustrated, to afford complete support and prevent the bandage being dropped off the stump. This bandaging should be renewed, with the same bandage re-rolled, three or four

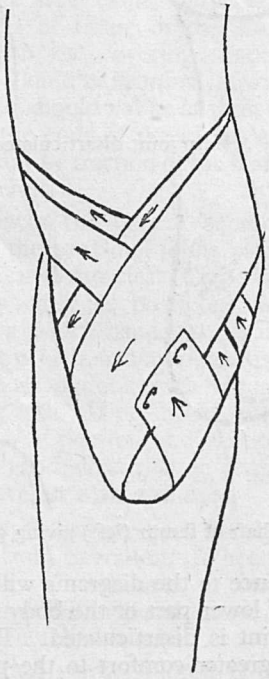
Diagram 3

Crepe bandaging of above knee amputation.





4th stage.



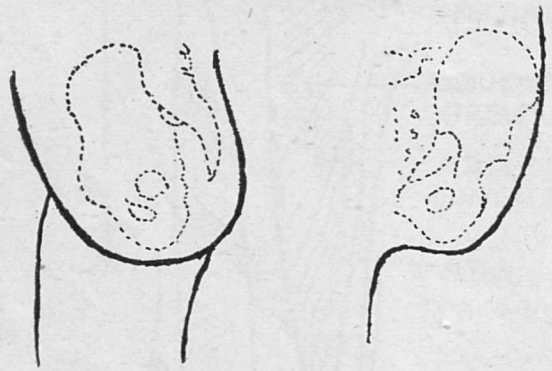
Completed bandaging (side view).

times a day and, of course, left on during the night. A 4-inch bandage is of no use.

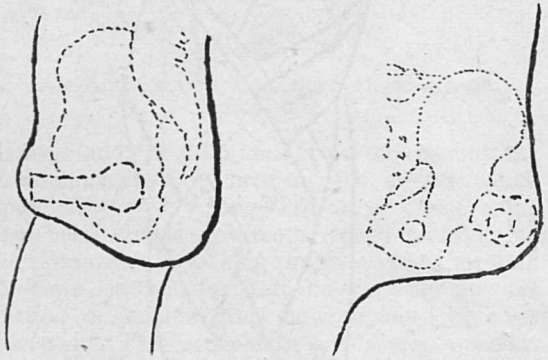
Stumps bandaged in this manner have lost the œdema and " shrunk " 2 inches in circumference in less than fourteen days and rendered limb-fitting possible. An ideal stump being provided by a surgeon, having healed by first intention, being correctly bandaged has been fitted, in many cases recently, in a matter of ten to twelve weeks with limb.

There are instances where the " above-knee stump " has to be shorter than those described. There is a greater amount of adductor muscle removed, but with the fitting of a specially-designed limb this loss is compensated for and the patient is not precluded from being any less active. On other occasions the femur must be cut to within a few inches of the great trochanter. In such cases *do not* disarticulate at the hip joint unless the whole of the femur is in a pathologic state.

Diagram 4



Hip joint disarticulated



Short shaft of femur (left) giving good contour.

A reference to the diagrams will show how the contour of lower part of the body is altered when the hip joint is disarticulated. The prominence left gives greater comfort to the patient with his artificial limb because it greatly assists the limb being kept in position whilst being worn. If the head of the femur is taken away the artificial limb slides round the body and off the body, because the whole action of walking with such a limb is carried out by a pelvic swing which naturally does " throw off " the limb. Such a short amputation cannot be bandaged and the main consideration for a surgeon is to avoid any scar tissue on the site where weight is taken—the ischial tuberosity.

BELOW-KNEE AMPUTATIONS.

Here, again, there are certain details to be considered for the benefit of the patient. Prosthetically all that is required is a stump of sufficient length to act as a " propeller " of the lower part of the artificial limb. Weight should not be taken on the head of the tibia. Results from hundreds of cases show that eventually the surfaces over the head of the tibia which have taken weight break down and a chronic bursitis results.

In the past rather long stumps have been made which later suffer from circulatory troubles.

A stump of 5 inches is excellent from a prosthetic and surgical point of view and does not break down, except again from direct trauma. The length is measured from the inner articular surface of the head of the tibia to the end of the amputated tibia with the fibula being cut $\frac{3}{4}$ inch to 1 inch shorter. If they are the same length union occurs at the end of the bones which destroys the " springy " movement at the head of the two bones. *Do not* remove the fibula.

The resultant amputation scar must be situated so that it is not irritated or rubbed by its movement in the socket of the artificial limb. The anterior flap method giving a lateral scar about $\frac{3}{4}$ inch to 1 inch on the posterior surface of the stump end is found to be most satisfactory. The nerve again should be treated with extreme care and only sufficient tissue left in the flap to afford its own nourishment. Do not allow the knee to be flexed on return to the ward ; if necessary, a back splint may be fitted until the scar is sufficiently healed. At this stage the after cure of the stump should be commenced similar to that of the above-knee amputation.

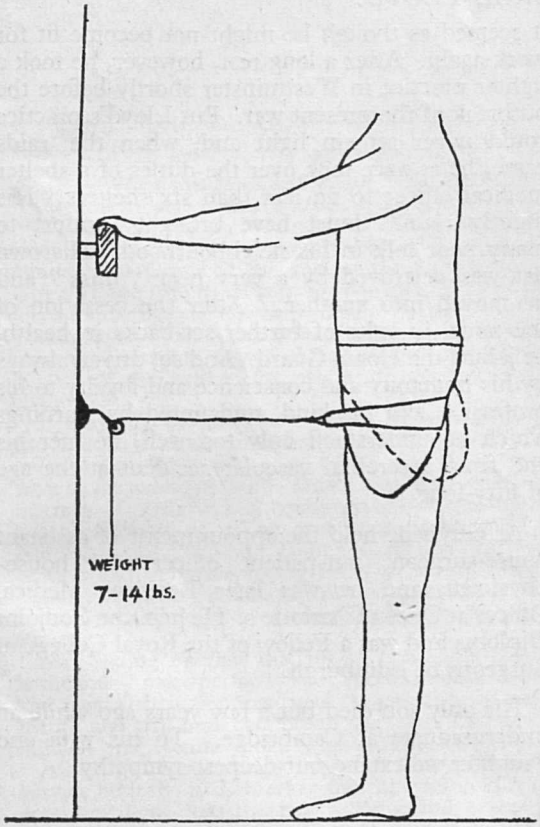
Encourage the patient to flex and move his knee joint and commence crepe-bandaging to reduce the œdema, but using a 4-inch bandage in every case—that is, with a normal adult. In uncomplicated cases with correct bandaging limb fitting can begin in ten weeks from the operation.

I would like to stress one very important point, both with regard to above- and below-knee amputations. It is to *avoid massage*. It has been found from experience that a great number of patients suffer from the pains in the sciatic nerve dating

from the massage. In the past massage has reduced the œdema to some extent, but the nerve lesions have been greatly increased and they are extremely difficult, if not impossible, to overcome.

I hope some of you gentlemen will take advantage of a demonstration which can be given through the courtesy of the Ministry of Pensions at Roehampton, where you will be able to see a modern method of exercising the stump before limb-fitting and the various types of limbs now fitted.

Diagram 5



Stump exercising by band around stump.
Backward and forward movement.

Whilst there you will see patients fitted with limbs that have been designed for all types of stumps, such as Symes, modified Symes, Stokes-Gritti and others, showing that a good limb-fitter *can fit* an artificial limb for any type of amputation. You can compare the gait of those patients with others having an ideal stump and a limb fitted to it.

ARM AMPUTATIONS.

Arm stumps are not weight-bearing and have to endure quite different strains and stresses from those of leg stumps.

Again, referring to the past twenty years' experience, it is found that long arm stumps are not so liable to circulatory disturbance. Long upper and lower arm stumps should be avoided chiefly in consideration for the patient and the supply of an artificial limb. A mechanical elbow joint must have sufficient room to accommodate the mechanism of the joint.

The ideal length of an upper arm stump for an adult is found to be 8 inches to 9 inches, measured from the tip of the acromion to the amputated end of the humerus. Or it may be expressed that a clear space of 3 inches should be left from the extreme end of the stump to the lower level of the olecranon process of the other arm. The scar should not be on the outer aspects of the stump end, but terminal—either from the equal anterior and posterior flap method or even from a guillotine amputation.

Regarding the lower arm the ideal length is 7 inches to 8 inches, measured from the tip of the olecranon to the amputated end of ulna. The ends of the bones in the stump should not be at the same level, the radius being $\frac{1}{2}$ inch shorter. The rotary mechanism of the wrist in an artificial arm must be considered so that a long stump may be left provided at least 2-inch clearance is given as from the ends of the opposite ulna and fibula.

Again, it may be necessary to leave a short lower arm stump; if this is the case, then a stump of $3\frac{1}{2}$ inches is quite serviceable, but it should not have a great deal of tissue in the stump—just enough to nourish the covering tissues of the stump. The scar should be terminal, as with above-elbow stumps, but should *not* be at right-angles to the line joining the ends of the radius and ulna; otherwise there may be traction of the scar between the bones themselves.

In both instances the patient should be encouraged to use the proximal joints early and to exercise the truncated muscles. Crepe-bandaging should begin as early as possible, in both of these cases with a 3-inch bandage. Again do not massage the stump. An arm amputee usually has a more despondent outlook with regard to the future than a leg case. If not fitted with an artificial arm as soon as possible the stump is made use of with such good effect that an artificial limb will not be persevered with and used.

Recent arm amputees have been fitted for limbs within a month from operation. When you visit Roehampton you will see men at work using appliances fitted to their artificial limbs and doing work equal to their fellow-workers.

In all amputation work children require very early attention and fitting with limbs, both for

legs and arms. Recently a boy who had a disunited fracture of the tibia for over a year had his leg amputated. It healed quickly and he was measured for his leg. He came for a fitting of the limb and within half an hour was walking well, only using a walking-stick for balancing.

A man with both arms amputated at the wrist was able to write with a pen within three days of a limb being fitted, and he is now dressing and shaving himself. A case of a young lady with similar amputations now writes, knits and does house work, *including* cooking!

In thanking you, gentlemen, for your keen interest, I would ask you to consider these details for the benefit of the patient in being restored to be a useful member of the community.

Obituary

FREDERICK GEORGE LLOYD.

IF any one of his student contemporaries who had the good fortune to keep in touch with him in after years, and thereby to know something of his life and work, were at any time asked for an opinion of F. G. Lloyd the answer, without a doubt, would be: "One of the best men I have known." One of the best men and one of the best doctors he certainly was, and what was often said of him in life can be said again, now that he is dead, in all truth and simplicity and with no sense of employing a ready phrase *de mortuis*.

As a young man he possessed a happy freshness and an open honesty of manner and of purpose which won for him the friendship and affection of his peers. Through years of unremitting toil in a heavy practice, with much sorrow and adversity and a succession of illnesses, these qualities were never overshadowed. He worked so hard and gave so much of himself to his patients that no time was left for care of self. Few physiques could have passed unscathed through the fatigues and anxieties which he bore. He was not blessed with a full measure of robustness and an immersion in the North Sea when he was serving as a naval surgeon in the last war left him with renal changes which were a precursor of other serious maladies in the latter half of his life. Eventually he had to give up his large practice in Hammersmith, and it seemed as though he might not become fit for work again. After a long rest, however, he took a lighter practice in Westminster shortly before the outbreak of the present war. But Lloyd's practice could never remain light and, when the raids came, he at once took over the duties of a shelter medical officer to no less than six shelters. His nightly rounds must have brought comfort to many poor folk in his neighbourhood. His own flat was destroyed by a very near "miss" and he moved into another. After the cessation of the raids, in spite of further set-backs in health, he joined the Home Guard. And so, driven always by his humanity and conscience and loyalty to his profession and his kind, undaunted by warnings which he understood only too well, he met his end from a cerebral vascular accident at the age of fifty-four.

At Guy's he held the appointments of assistant house-surgeon, out-patient officer and house-physician, and he was later Resident Medical Officer at Queen Charlotte's. He held the Conjoint Diploma and was a Fellow of the Royal College of Surgeons of Edinburgh.

His only son died but a few years ago while an undergraduate at Cambridge. To his wife and daughter we extend our deepest sympathy.

Sector News

Pembury Letter

THERE once was a house physician,
Peter by name, a maestro of pot citration,
Fond of fair ladies and adequate filtration,
While hurrying to view a bloke with a cast colossal
He over-inverted and broke his last metatarsal.
Now he can be espied
Doing his round at the bedside
By his muffled master—
In plaster!

There once was a gyne, of feature aquiline,
Whose motto (*in voce sotto*) was "Radium ad uterine."
He has started his metamorphosis
With an unexpected anastomosis;
His joining up of gut to gut is but a prelude to his calling up,
For the Home Guard request his coalition
To teach the boys how to shoot (? from Sim's position).
What will happen to the infants mewling and puking
While Uncle Ivor is out shooting?
It will not be the same, so, unlike Utopia,
This House of Pain (and pure culture).

There once was a handsome orthopædician,
Full of good spirit, a sound clinician,
'Tis rumoured that he used to sit
At dead of night with lamp unlit,
And practise the best inflection
With which to praise the great technician.
" It's a gem ! It's poifect ! It's marvellous ! "
That's what we call " The Bone Stooge's Chorus."
To toil thus now there is no point
Or so he tells us with a chuckle,
So he just ambles round from joint to joint
Before popping in the local.

There once was a surgical tutor,
Wore goggles, short pants, an adorer of pewter,
One night he did operate,
Even though it was late,
On a lump in the triangle of Scarpa.
For his skill
He had his fill
Of mutual admiration.
What did he find
When he got right inside—
Strangulation ? No ! Infiltration.
Oh ! Mortification.

G. E. McF.

Correspondence

FUTURE OF GUY'S HOSPITAL.

To the Editor of the GAZETTE.

SIR,—Writing from a Land where no building of note seems to have been constructed since the Pyramids, I hasten, though belated, to support Brock's eloquent appeal that the preservation of the Georgian remnants of Guy's be the goal of the Governors. If Guy's House cannot be kept for patients, let it be kept for administration, superintendent's quarters and the new college. The whole stream of Guy's life for two hundred years has flowed through the colonnade and flowed all the brisker for passing through well-worn channels.

If Guy's House is to be replaced by a building like the Middlesex or an uninspired box like Nuffield House, more damage will be done to Guy's than the Germans have so far managed to do. Guy's men have the deepest distrust of their official architecture—*si monumentum quaeris circumspice*. The generation which built the Natural History Museum, Hunt's House and St. Pancras Station had the same happy belief in its architectural capacity as Hedley Atkins has in that of his own, but is it even probable that his generation will get the opportunity ?

Mr. Slesinger's view that the ideal hospital building is the one " most perfectly suited to the work it houses and from that it acquires beauty " sounds very well in theory and will be a comfort to me when I survey the military architecture which at present surrounds me.

All Guy's men probably hope that Guy's House will survive both the housebreaker and the bomb. If it does not, they hope that the best architectural brains will design the new buildings. They hope, but doubt.

Yours, etc.,
E. R. BOLAND, M.E.F.

(This does not necessarily re-open this subject, but letters from Guy's men abroad are always welcome.—ED.)

PAPER SALVAGE AND PAPER-SAVING.

To the Editor of the GAZETTE.

SIR,—Between November 1st and March 15th (4½ months) paper salvage at Guy's has reached a total of 20 tons, for which the Hospital has received £100. Of this figure £7 12s. 8d. has been collected by the Appeal Office and represents the proceeds of paper salvage by outside friends of the Hospital. Of the total weight 4½ tons was made up of the clinical records up to the year 1900 and of the X-ray registers up to 1923. In view of the special and forceful appeal of an organisation established by Lord Beaverbrook the Medical Committee reluctantly recommended the Governors to surrender these records as an important and valuable contribution to the national effort. In making this sacrifice the attention of a high official of the Ministry of Supply was drawn to the continued publication of periodicals of non-educative value and of brochures advertising pharmaceutical products and other preparations. Nearly 11 tons of the total weight was collected during the specially organised Paper Salvage Week and thereafter the amount collected has been at the average rate of nearly a ton a month. When last I addressed you on this subject I challenged other hospitals in Sector 10 to organise paper salvage weeks and to beat our figures. To this challenge there has been no response.

Not only has Guy's salvaged paper, but it has also saved it. For example, the following amounts of certain types of paper were ordered during 1938 on the one hand and since January 1st, 1941, on the other. The second period represents, therefore, a fifteen-months' order :—

	1938.	1941-42.	Still in hand.
Guy's slips	350,000	50,000	15,000
Small Guy's envelopes	70,000	10,000	1,750
Large Guy's envelopes	80,000	10,000	200
Single-sheet Guy's notepaper	25,000	12,500	6,000
Double-sheet Guy's notepaper	20,000	—	—

The restricted activities of the Hospital in 1941 as compared with 1938 should, of course, be borne in mind.

It was not my intention, however, to waste your valuable space merely to draw attention to the facts set out above. I ask you also to be good enough to allow me, through your columns, to address the following suggestions to those of your readers who are working at Guy's :—

1. Collect together all the spare paper in your possession which has writing or typing on one side only, the subject matter of which is not of a confidential nature, and take it to the Superintendent's Office, where it will be available for use in any department for carbon copies, improvised Guy's slips, intra-hospital communication, etc.
2. Reply to every letter, which does not require filing, on the back of the letter itself.

3. Never use a new envelope, except when writing abroad, when an old envelope is available. It may seem unnecessary to mention this, but one still sees new envelopes used even in intra-hospital correspondence. If you have more used envelopes than you require take them to the Superintendent's Office, whence they may be obtained by departments which need them. Remember that in intra-hospital communication it is often unnecessary to use an envelope at all. Fold the paper so that its contents are concealed and fix it with a portion of a gummed label.
5. If you are not very convinced of the importance of paper salvage and saving, visit the exhibition at the old Ford showrooms in Regent Street. There you will see that shell cases really are made from paper. You will also see, incidentally, a photograph of nurses helping with paper salvage at Guy's.
6. Remember to take your paper salvage to Martha Ward (Colonnade entrance). If you have any difficulty in doing this let me know and I will arrange to have it collected.

Yours, etc.,
P. M. F. BISHOP,
Deputy Superintendent.

Superintendent's Office,
Guy's Hospital, S.E.1.

Hospital Information, etc.

Pass List

ROYAL COLLEGE OF SURGEONS.
FINAL EXAMINATION.
February, 1942.

PART I.

Surgery.

S. E. Blockley
T. P. Cheevers
B. M. Dicker
B. J. Dupree
R. D. Emslie
P. G. C. Farrant
G. C. Fuller
A. A. Halamandres
P. H. S. Lahaise
H. W. Palowkar
B. W. Pett
C. E. Stuart
C. Sumsawaste
R. A. S. Tipper
R. F. E. Wicker

PART II.

Dental Surgery.

M. Barber
H. L. Bevan
J. K. Blackwell
D. R. Corless
A. A. Dyas
P. C. Gartrell
G. J. Hayward
H. H. S. Payne
J. Rankin
N. I. Scott
N. Stark
M. Suskin
R. F. E. Wicker

Papers by Guy's Men

Matthews, E. Congenital Fistulæ of the Lips. *Dent. Rec.*, 1942, **62**, 61.

Cameron, H. C. Fifty years' progress in Pædiatrics, Pyelitis and Pyuria. *Clin. J.*, 1942, **71**, 45.

Douthwaite, A. H. The use of Sulphonamides in General Practice. *Ibid.*, 52.

Marston, A. D. The centenary of the first Anæsthetic Use of Ether. *Proc. Roy. Soc. Med.*, 1942, **35**, 279. (Sect. Anæsthetics.)

Harries, E. H. R. The trend of Fever Hospital Practice. *Ibid.*, 265. (Sect. Epidem. and State Med.)

Forman, Louis. (1) Leprosy; (2) Familial and Cc - genital Basal-celled Epithelioma in the Distribution f Epithelioma Adenoides Cysticum, and showing son e f the histological changes of the latter; (3) Dermat s Herpetiformis, with unusual limitation of the disea :.f *Ibid.*, 260–261. (Sect. Dermat.)

Mill, W. A. Cancer of the Oesophagus. *Post-Gr '. Med. J.*, 1942, **18**, 31.

Marriages

HEAP—GRIFFITH.—On Saturday, March 21st, 1942, at Southwark Cathedral, Benjamin M. Heap to Betty Griffith.

Births

DAVIS.—On March 12th, 1942, at Farnborough Hospital, to Peggy (nèe Parks), wife of A/Sqd/Ldr. E. I. Davis—a son.

Missing

We regret to record that information has been received that Major J. L. Garrard and Captain E. J. Martin, A.D. Corps, have been posted as missing.

Deaths

BENSON.—On March 19th, 1942, at Worthing, Henry Thomas Benson, M.R.C.S., L.R.C.P., aged eighty-three years.

ISAAC.—In March, 1942, Benjamin Isaac, J.P., M.R.C.S., L.R.C.P., of Ldansadwrn.

LLOYD.—On March 16th, 1942, Frederic George Lloyd, F.R.C.S., 19, Ashley Gardens, S.W.1, aged fifty-three.

PRYN.—On February 20th, 1942, Sir William Wenmoth Pryn, K.B.E., C.B., D.P.H., retired Surgeon Rear-Admiral, aged eighty-two.

ROBERTS.—On March 15th, 1942, Astley Carrington Roberts, F.R.C.S., of Badlesmere, Eastbourne.

WILLIAMS.—On March 16th, 1942, John Owen Williams, M.R.C.S., L.R.C.P., of Barmouth, aged seventy-three.

Notice

A copy of Guy's Hospital Reports, 1855, Volume I (3 Series) and copies of Wilks & Bettany's "History of Guy's Hospital" are urgently required.—The Manager, *Gazette* Office, Guy's Hospital.

EDS. { N.A.N. / H.F.O.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *18th April 1942* — *Number 1402*

PASSIM

THE importance of the saving of paper and the results that can be achieved by a paper salvage campaign were the subject of a letter from the Deputy Superintendent in last fortnight's issue of the *Gazette*. The subject has been several times stressed in these columns. The size of the *Gazette* itself has been reduced already very drastically as compared with pre-War standards, but it has now become necessary for the *Gazette* to be made smaller still. It has been decided, therefore, to reduce the actual size of the pages to just over one-half of their present size; the size of the print will also be reduced, with the result that it will be possible to present the same amount of "copy" as at present with a greatly reduced ration of paper. As a further measure of paper economy, in the future, the number of copies of each number printed will correspond very closely to the actual *Gazette* circulation. Student members of the Clubs' Union in particular are requested to obtain their copy of the *Gazette* from their usual distributing centre as promptly as possible. Requests for numbers published more than a month previously can no longer be considered. For the benefit of those subscribers who preserve their *Gazette* in bound form, it is hoped that the reduction in size of the pages may be postponed until the end of the half-year.

THE Examining Board in England, as announced in another place in this issue of the *Gazette*, has reduced the length of the course of study for the final examination from 33 to 30 months. This step is welcomed as a war-time measure, as it will increase the number of medical practitioners for the duration. It is sincerely hoped that the University of London will similarly shorten the course of study for the Third (M.B., B.S.) Examination in order to enable newly qualified practitioners to take this examination before they are called up for service with H.M. Forces.

THE work on the lift in the Medical Block is making satisfactory progress and the re-opening of wards is imminent. In addition, greater facilities for the treatment of children are to be made available. Though we thoroughly approve of this step we dare to question the advisability of establishing a children's ward in underground premises.

We have looked around the available sites, and we feel that it ought to be considered whether there is no better place than the basement of the York Clinic.

There are disadvantages to going back to the Children's Ward in the Medical Block, however tempting it may be. The lift will not be made to work to the third floor and there are no steps as yet leading up to it. In addition, the principle of not opening wards on the third floor must be approved of.

But there can be little objection to having the children on either the ground floor or the first floor in the York Clinic. The ground floor, which at present houses offices only, appears to be admirably suited, as there are a number of spacious rooms with large windows. Suitable accommodation for the offices could surely be found quite easily.

IN the last war the *Gazette* had news from correspondents on every front. This time, with a few notable exceptions, there has been very little news from Guy's men; yet many are in the Forces and must have had experiences which would interest and help their fellows who may find themselves in similar situations. This war spreads from the tropics to the arctic, and presents from ocean bed to stratosphere unlimited possibilities for strange and diverse illness. The *Gazette* would be glad to hear from those who can spare the time and will, so far as paper rationing and censorship allow, print their accounts of the War.

WE are pleased to congratulate Colonel W. H. Ogilvie upon his promotion to the rank of Brigadier; Major F. Cook upon his promotion to be Lt.-Colonel.

The Retinal Vessels and the Changes Occuring in them in Old Age and Disease

A Clinical Lecture delivered by O. G. Morgan, Esq., M.Ch.

GENTLEMEN,—This is a rather complicated problem because there is so much variation in the nomenclature of the different vascular changes, and I do not suppose that what I propose to say will satisfy everyone. However, it is necessary to try to define what we are going to describe and to classify these conditions as simply as possible.

Arterio-sclerosis includes a group of largely independent pathological processes. There are degenerative changes which occur in the vessels due to the wear and tear of living and which are almost universal as an age change. These are called *Athero-sclerosis*. Athero-sclerosis is more or less equally distributed throughout the body and is quite independent of the blood pressure. It affects the vessels in all the organs, but the parenchyma of these organs is only affected secondarily and can carry on its functions, though usually with a slowing up of its activities. So in the retina, though there may be fairly marked visible alterations in the vessels, the retina itself shows no definite pathological changes. Temporary or permanent loss of vision may occur as a result of atheromatous changes in the main retinal artery or vein in its passage through the optic nerve. Following a gradual narrowing of the lumen of the artery, a patient may complain of repeated but temporary periods of blindness before a final attack from which there is no recovery. Observers have occasionally examined the fundus in these prodromal attacks, and have noted the thread-like arteries and have seen them fill with blood again. There is very probably an element of superimposed spasm in these cases. In the final picture of complete thrombosis there is no perception of light and the ophthalmoscope reveals the typical pale œdematous fundus with the cherry-red spot at the macula. The explanation of this is that the internal layers of the retina having lost their blood supply, die, and, as a result become opaque and pale. At the macula, however, these layers are so thin that the choroidal red reflex comes through and shows up as a red spot. When the vein becomes thrombosed there is not complete loss of vision, but a gradual reduction of visual acuity due to the multiple retinal hæmorrhages which are scattered all over the fundus. Thrombosis may, of course, occur in a branch of the artery or vein and the fundus signs are similar, but affect only a sector of the picture. If, however, as so frequently happens in the elderly, hypertension intervenes on athero-sclerosis, then changes occur in the retinal tissues themselves and you get the pictures of arterio-sclerotic retinitis, albuminuric retinitis or diabetic retinitis, or, as they are more correctly termed, retinopathies.

The second big group of cases is that of *hypertensive sclerosis* which may be quite independent of athero-sclerosis.

Essential hyperpiesia has two stages—a first stage in which there is persistent and progressive raising of the blood pressure, which may be hereditary, metabolic, toxic, infective, endocrine or psychological, or of undetermined origin, and in which the only visible sign in the retinal vessels is a tonic contraction and so a narrowing of the visible blood column—and a second stage which is a direct result of the long continued hypertension, in which marked changes in the vessels occur which we will consider in detail later. In the first stage, which is called simple hyperpiesia, the condition is curable if the causal agent can be discovered and removed. In the second stage arteriolar sclerosis has been produced and a permanently diseased vascular system is present.

Arterio-sclerotic retinopathy occurs when this second stage has lasted for some time, but with the kidney function still satisfactory.

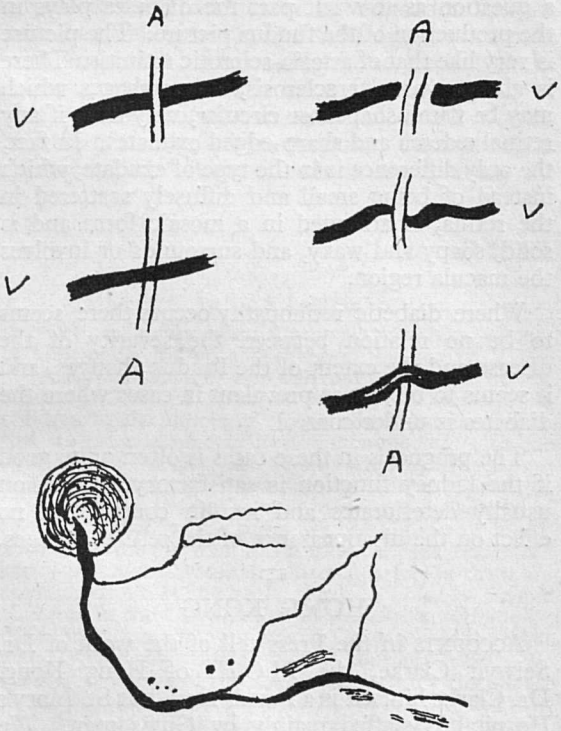
Albuminuric retinopathy results from several different conditions. It may occur when vascular sclerosis and hypertension have persisted for a number of years and have ultimately affected the kidneys. It may result also from those types of primary renal disease which produce hypertension, arteriolar sclerosis and toxæmia, such as :

1. Diffuse glomerulo nephritis, which may be acute or chronic and which affects the glomeruli.
2. Toxæmia of pregnancy, in which the tubules are affected.
3. Malignant nephro-sclerosis, where there is a hypertension and toxæmia due to destruction of the parenchyma of the kidneys. This may be a terminal stage of a simple hyperpiesia or a condition which appears suddenly and apparently independently.

Diabetic retinopathy occurs in elderly people who are the subject of vascular sclerosis complicated by glycosuria.

Now we must consider what type of vessel we are dealing with in the retina. The retinal artery

in the optic nerve is like any other artery of similar size elsewhere. A single layer of endothelial cells lying on an internal elastic lamina, a well-developed muscular coat—adventitia intimally fused with the dural sheath and with the cribriform lamina where it passes through these two structures, and a slight constriction in its lumen at these points also. On passing through the lamina cribrosa the elastic lamina soon disappears and the muscular coat is reduced to a very thin and non-continuous layer—and so the artery becomes an arteriole very soon after leaving the edge of the optic disc. The other peculiar arrangement is that the vessels are fused together at the arterio-venous crossing, the endothelium of the vein lying on the outer surface of the media of the artery and surrounded by a common adventitia. This is found nowhere else and the result is that if the artery is more tortuous, the vein is dragged out of its normal course and deflected, and the artery in sclerosis compresses the lumen of the vein. The choroidal arteries are very different. They have a well-developed internal elastic lamina and thick muscular coat throughout, except in the very terminal precapillary branches.



Now we can take the actual pathological changes which occur in the vessels themselves. In atherosclerosis there is a diffuse fibrous and hyaline degeneration of the muscularis, and there may be localised atheromatous patches which consist of fatty deposits beneath the endothelium. The cells containing the fat are proliferated endothelial cells. There may also be fragmentation of the underlying elastic lamina as well. Atheroma chiefly occurs in arteries and not in arterioles, and so this change is more noticeable at or near the disc. It is also very common in the choroidal circulation. In arteriola-sclerosis there is, first, proliferation and hypertrophy of the media (muscular sub-endothelial and elastic coats) followed by fibrosis and hyaline degeneration. Fat may appear later.

We can now consider the changes which can be seen by ophthalmoscopic examination and try to correlate them with these pathological pictures :

1. Translucency of the vessel walls. In the normal fundus this translucency is so nearly absolute that the vessel walls are invisible, i.e., they have the same refraction index as the surrounding retina, and so where a vein passes behind an artery the venous blood column can be seen through the arterial wall. In arteriolar-sclerosis the arterial walls conceals the venous blood column from view. This sign is a very constant one and was first noted in 1898 by Gunn, the pioneer in fundus changes in vascular disease.
2. The vascular reflex, which is the narrow light reflex from the media—chiefly the muscular coat, becomes changed in sclerosis—
   (*a*) It becomes increased in brightness and the vessels look like copper wires.
   (*b*) It may involve the whole vessel so that this looks like a silver wire with no sign of any blood column.
   (*c*) It may be dotted or beaded, and so irregular.
3. Sheathing of the vessels—by white lines running parallel and on either side of the blood column. This may become complete and so the vessel looks like a pipe stem.
4. Changes at the arterio-venous crossing—
   (*a*) Concealment of venous blood column by the arterial wall.
   (*b*) Constriction of the veins by the thickened artery.
   (*c*) Deflection of veins out of their normal course.
   (*d*) Humping of vein over artery when it lies in front of it.
5. Irregularity of lumen which may be due to patches of atheroma encroaching on the vascular channel or irregular spasm affecting the vessel.

6. Increased tortuosity and enlargement of vessels. Increase in the thickness of vessel walls must automatically be followed by increase in tortuosity (note varicose veins). This tortuosity may show itself very markedly in the small vessels leading to the macula and they become corkscrew in appearance. The smaller venules also often show the same change.
7. General narrowing of the blood column due to organic thickening of the vessel walls, but possibly due to atheroma in the retinal artery in the optic nerve, so producing a smaller blood flow—or it may equally be the visible result of tonic spasm of a diseased vessel. This spasm is certainly often present though the cause is unknown. It may be due to the liberation of a histamine-like substance resulting from faulty metabolism. It is almost axiomatic that the most characteristic result of raised tension is narrowing of the arteries. Usually the arterial diameter is two-thirds that of the vein. If it is down to one-half, the blood pressure is usually up to 200 mm. Hg.
8. Arterial pulsation—which is always pathological and only found where the arterial tree has lost its elasticity. In this case the systolic pulse passes along the relatively hard tube to the arterioles and so is visible to the observer.

When vascular sclerosis, hypertension and toxæmia are present together, changes occur in the retina as well as in the vessels.

In *arterio-sclerotic retinopathy* all the above changes occur plus hæmorrhages and exudates, but with no retinal œdema. The exudates are small, very bright, and occur chiefly in the central area and the hæmorrhages are also small and circular. This condition is usually bilateral and is compatible with a fairly long expectation of life.

Renal Retinopathy.—The main difference here is in the presence of œdema. Vascular sclerosis is marked with hæmorrhages and exudates, but there is generalised œdema of the retina as well, so that there may be swelling of the optic disc, disappearance of the vessels at times in the œdematous retinal tissue, a star figure at the macula and exudates which are of a fluffy cotton-wool type. These cotton-wool patches are probably plasma and fibrin which pass through the diseased and so permeable vessel wall, and become partly organised in the retina.

In eclampsia there is noticeable narrowing of the vessel walls due to spasm and the œdema may be so marked that the retina becomes detached by subretinal exudation. This condition being an acute one, the cause can be removed, and the retinal picture then quite quickly settles down and may leave hardly any trace.

In malignant hyperpiesia the vessels may be extremely tortuous and narrow. Oedema is very marked, exudates and hæmorrhages massive, œdema of the disc may be so severe that the picture resembles advanced papillœdema. Prognosis in this latter condition is very bad, as the kidney tissue is damaged, and renal insufficiency supervenes and causes death.

Diabetic retinopathy is rather a problem, as it does not occur in the juvenile diabetic in whom the disease is in its most severe form, and so it is a question as to what part the diabetes plays in the production of the fundus picture. The picture is very like that of arterio-sclerotic retinitis. There is always vascular sclerosis, hæmorrhages which may be flame-shaped or circular, very little if any retinal œdema and sharp-edged exudates. In fact, the only difference is in the type of exudate, which instead of being small and diffusely scattered in the retina, is arranged in a mosaic form and is solid, soapy and waxy, and surrounds or involves the macula region.

Where diabetic retinopathy occurs there seems to be no relation between the severity of the disease and the extent of the fundus changes, and it seems to be just as prevalent in cases where the diabetes is under control.

The prognosis in these cases is often quite good if the kidney function is satisfactory, but vision usually deteriorates and insulin control has no effect on the disappearance of the retinal changes.

HONG KONG

ACCOUNTS in the Press tell of the work of Dr. Selwyn Clarke, the M.O.H. of Hong Kong. Dr. Clarke himself is a Bart.'s man, but St. Mary's Hospital is staffed mainly by Guy's men. We offer our sympathy to their relations in this country. It seems that, in spite of every obstruction from the Japanese, they are making heroic efforts to assist the sick and wounded and prevent the spread of disease.

According to our records the following Guy's men and one Guy's nurse, Miss D. M. Baker, were in Hong Kong up to the beginning of 1941. We have no information as to where they were when the Far Eastern war began :—G. T. Bolean, P. F. S. Court, K. H. Digby, A. Nelson Jones, J. Lanchester, L. D. Pringle, L. T. Ride, J. T. Smalley, S. T. Wong.

The Red Army

THOSE who heard Dr. John Lewis's address in the Sitting Room of the Nuffield Nurses' Home—and it was a pity even more did not turn up—must have been glad that Professor Ryle had invited such an eloquent and powerful speaker to tell of the organisation, strength, strategy, tactics and composition of the Red Army. Then, in about one hundred minutes, Dr. Lewis showed how the Red Army derived its huge strength and staying power from the far-sighted planning of Mr. Stalin and the Communist Party. It has been no accident that only the Red Army has proved itself capable of bearing the full weight of the facist blows. Years of patient work in industry and education laid the basis of a society in the U.S.S.R. able to withstand such an assault. This industry has produced the tanks, planes, guns and all the other engines of war; the education has made men and women capable of using them victoriously. In replying to questions Dr. Lewis demonstrated that the common ownership of industry and land and the method of electing representatives to the soviets was the essence of democracy of the U.S.S.R.

It is to be hoped that Professor Ryle will be able to arrange for more lectures upon Russia, so that we, in Britain, may be better able to understand the nature of a State which has for long appeared enigmatic to so many, and even now that it is a valued ally and friend is different in some ways from our own country. It would be interesting to hear about hospitals in the Soviet Union, so that we could compare the lot of medical workers in that country and their success in caring for the health of the community with our own. The S.C.R. provided a series of educative diagrams and some remarkable photographs full of the achievement in health and happiness which twenty years of political and social progress have brought to the heterogenous peoples of the Soviet land.

Sector News

Guy's Letter

FOR nearly nine months now we have been labouring under the misapprehension that to say, "The children of the Borough are supposed to be evacuated" is the same as saying, "There are no children in the Borough." As a direct corollary from this we provide practically no accommodation for the treatment of the sick members of what is, in fact even if not in theory, a large infantile and toddler population. There are four beds in a small room in the basement of the York Clinic, which composes our Children's Ward. There are usually four times four children under the age of ten in the Hospital. Three-quarters of them are accommodated in the adult wards. This, as anyone educated in the Guy's school of pædiatrics well knows, is bad medicine. This, as anyone constantly in the adult wards well knows, means almost constant babel. To the sick members of the adult wards at this Hospital it means sleepless nights and peaceless days. It seems hard that these poor folk should have to pay for the disobedience of other and probably quite unknown Borough parents. Either we must find alternative accommodation for the children, or we must admit that we have not got the facilities for looking after them, and allow them to be referred to hospitals which have.

It is pleasant to find in the wards after visiting days the yellow splash of daffodils dotted around the place. It is one of the few signs of the advent of spring that we have up here. Miss Addiscott's garden bears further evidence to the fact, as do the mixed voices idly chattering away on the gravel in the Park at 9 p.m. as the days grow longer.

The Midwifery Department having been driven out of Vic, lock, stock and barrel, by the Yellow Staph., have taken up a very comfortable residence on D floor in Nuffield. In the near future we hope to retake this territory from the yellow peril. (General Wavell, please copy !)

H. A. R.

Farnborough Letter

THE sun sinks over the Midder Block, the daylight fades, the last Spitfire has taxied home to roost and the balmy coolness of a perfect April evening caresses the denizens of Farnborough. Who, you ask, are these denizens? Why, there are patients, nurses, students, doctors, porters, maids, but no sound betrays the nearness of these as we sit in our upper room. But there are other denizens of Farnborough who are waiting now to come to life and make the night hideous with their revels; already they can be descried—dark shadows skulking in the doorways, lurking under the parked motor-cars or rustling through the shrubberies. Soon there will rise up to the stars such a cacophony as will stir all but the heaviest sleepers to irate consciousness and arouse in the still wakeful all their primæval instincts for the chase. During the daytime the authors of this disturbance may be seen quietly and sedately lounging in the sunnier spots of the Hospital, but, like Hugo's Parisian beggars, at nightfall they take on a new existence, becoming violent and unruly disturbers of the peace. In number they seem legion, in appearance they are pleomorphic, in love they are earnest; in short, they are cats celebrating the coming of spring. Again, like the Parisian beggars, they permeate everywhere, but they have their own back-street *quartier*; in the case of the cats it is the Isolation-huts where they are almost as numerous as the patients. There have been complaints of broken sleep from an E.M.S. surgeon and a K.C.C. psychiatrist, but, after all, if there are cats in the Hospital, we suppose cats will be cats. At Guy's, of course, there are underground passages and, so far as we remember, the cats used to keep to these catacombs, but here there are no catacombs and so the cats have no choice but to keep to the surface. Cats in their proper place can doubtless be most charming company; one of them inspired Thomas Gray to write a most touching ode on the occasion of its demise, but what, we wonder, would this most polished writer have said

about a host of cats howling to high heaven in Harlem harmony at a time when honest men should be asleep—cats whose home is the home of infectious disease ?

One night, however, the howling of the cats gave way to the softer wailing of the R.A.F. saxophones, leading a dance in the Central Hall. This was a most satisfactory function, well but not uncomfortably well attended, well run and extremely cheap at the price. We congratulate the organisers, the Farnborough Social Club.

Mr. Jackson has left us for Preston Hall and a series of short holidays have been in progress ; otherwise nothing much has happened and hence the prominence given to the cats.

V. G.

Tunbridge Wells Letter

THE blurring effect of a holiday is only too tragically seen when one attempts to summarise events at the end of a term. Haziness is compatible with a party, but not with the idea it represents. Most guests could reply to a question as to why they were present, but when asked what happened and how it happened may surprise you by standing agape. For this was a farewell party, and mayhap this coming term we shall miss the honeyed accents of the departed Dentals. But to assume that farewell parties are the essence of sobriety and sorrow is to lack the connoisseur's knowledge. They of all parties are the most gay and most lavish, for in the minds of those who are toasting the departing is the wild generosity of the patron, while the " toasted " have very clearly in their minds the dashing slogan, " Drink and be merry, for to-morrow we die," and hence throw aside any offending propriety. Imitation of the *élite* featured in the bill of entertainments ; this has always been the heritage of democracy. The right to tread lightly on the skirts of dignity, and success that night, seems to point to currents of such talent, flowing, latent, under the exterior of medical life. Maybe the Dramatic Society is an opening for such people ; a convenient stage, kindly lent by the Convent, should appeal to some, while close co-operation with the nurses to others.

This latter sentiment of co-operation seems to prevail in widespread circles, for a debate so personal as to ask, Should women students be admitted to Guy's ? comes through with whole-hearted approval that they should ; only a small minority decided to spurn the attack on male seclusion. The debate was popular in an inoffensive manner, but is it just enough to draw the crowd and see the sparks fly. Perhaps the future will see a selective committee pondering over their choice and, even at the expense of numbers, provide us with bigger and brighter sparks ; perhaps they may even bring the elements and let us watch the explosion.

A scrap-iron collection is interesting to watch (if one is in such a lucky position) rather because of the facial expressions of the workers than the excitement of seeing an accumulation of twisted iron, for in the expression can be seen all the triumph of discovery, the glint of satisfaction on doing something useful (at a sacrifice) and the childish curiosity as to what his fellow has contributed.

We in the Home Guard now seem to hold the idea that to change weapons, in the midst of battle or not), is a sign of good luck. We have not changed to pikes ; the dangers incurred in using these are surmountable, of course, but there must be some rifles lying around with suitable ammunition—ammunition which will no longer raise us on a pedestal as being the exception in the district !

E. J. F.

Correspondence

MEDICAL GENETICS.

To the Editor of the GAZETTE.

SIR,—War-time is not, perhaps, the ideal moment for starting long-term investigations of a purely scientific nature. Yet the scattering of Guy's in the Sectors prompts the thought that the Hospital and the Department of Biology are losing a capital chance of an enquiry into medical genetics. As a result of the division of the Hospital into urban, suburban and rural branches a much fairer sample of the population at large must be coming under biological review than was the case in peace-time.

The science of human biology and particularly of human genetics does not receive the attention it deserves except from individual workers and highly specialised institutions such as the Galton Laboratory. Yet it might be thought that so big an organisation as Guy's Hospital, designed to serve almost every kind of ill-health, and supposedly interested in every enterprise tending to the promotion of better health, could find a moment to spare for human genetics. But how perfunctory are the so-called " family histories " given in the case sheets ! And how seldom is an enquiry made into the consanguinity of parents even in conditions where consanguinity is known frequently to be found ! How much genetical information, one wonders, will the investigator of the future obtain by analysing the Hospital reports of, say, cases of allergic diseases for the last five years ?

Not that much profit would accrue to a clerk or houseman, indeed, if he spent even a quarter of an hour instead of thirty seconds on such enquiries. Rather, a central bureau in each hospital is needed, for the following reasons. It is easier for one practised in these enquiries than for the unskilled questioner to obtain relevant information. Moreover, the dermatologist is interested in dermatology, and the hæmatologist in hæmatology, while the geneticist must remain interested in all departments impartially. Again, one detail of a history may lead to a lot of correspondence, which the clinician has not the time and might not care to involve himself in. Much of the information collected could not by its nature be of immediate practical use : its collection requires a mind of somewhat academic colour. Lastly, the information to be accessible must be filed elaborately, so that statistical abstracts can be made without much waste of time.

One would have thought that a bureau of this kind was the proper extension of the Department of Biology into the Hospital, and its most natural link with it. From the point of view of the student the gulf between the study of biology and the study of medicine has become too deep, far deeper than can have been intended by those who first included biology in the medical curriculum. Yet there are two branches of experimental biology which have a close bearing on medicine : one, the discovery of the fundamental mechanism of inheritance, and, two, the discovery of a technique by which the variability implicit in all living phenomena can be measured.

The Department of Biology, as well as running a bureau of human genetics in the Hospital as part of the

Hospital's study of human disease, would be well placed for investigating the distribution of some of the normal genes in a healthy population, and that, perhaps, is a matter of as much importance as tracing the inheritance patterns of pathological phenotypes. It would probably find itself interested in the influence of various environmental factors, and make inevitable alliance with the Lady Almoner's department. The more one thinks of it, the more there is for the biologists to do—not in the Medical School, but in the Hospital itself. Which brings me back to where I started. War-time is not, perhaps, the ideal moment, etc.

Yours, etc.,
DONALD McGREGOR.

Guy's Hospital, S.E.1.

SECTOR LETTERS.

To the Editor of the GAZETTE.

SIR,—In these days of paper shortage it seems reasonable to remark upon the large number of meaningless Sector letters that have been appearing lately.

If these have any sense at all it is apparent only to the members of the residents' mess which the author happens to adorn. They convey but little to the other readers of the eight hundred copies of the *Gazette* which are sent round the Sector. To the two thousand-odd readers outside the sector they can convey nothing at all.

A Sector letter should be about the Sector; by all means let it be seasoned here and there with local scandal, but to allow it to consist wholly of a mixture of crumbs from the residents' table and sly digs at members of the Staff is to waste time and paper.

People about to take up appointments in one or other of the bases for the first time would like to know something of the conditions holding good there. With the occasional exception of the Farnborough letter no idea of these is ever conveyed.

May I suggest, therefore, that these letters should in future contain far more news about the general life of the bases and of the good work done there? They would then gain the interest of twenty people where nineteen were bored before, and avoid a strong resemblance to a third-rate "tatler."

W. E. S. BAIN.

Guy's Hospital, S.E.1.

BOXING CLUB.

To the Editor of the GAZETTE.

SIR,—The Boxing Club at Guy's, since the Clubs' Union was formed some fifty years ago by the amalgamation of various clubs and societies—the constituent institutions—existing at the Hospital, has been, together with fencing and gymnastics, but part of the constituent known as the Pavy Gymnasium.

At a general meeting, held at Guy's on March 26th, it was proposed by myself, and carried unanimously by all members present, that the Boxing Club apply to the Clubs' Union for admission as a separate constituent institution, the institution to be known as the Guy's Hospital Boxing Club.

The election of officers which took place was as follows:—

President	Mr. E. N. Doubleday.
Vice-Presidents	Mr. W. D. Doherty, Mr. N. L. Eckhoff, Mr. T. J. Evans, Professor H. B. Fenn and Professor T. B. Johnston.
Captain	A. A. Halamandres.
Vice-Captain	T. L. T. Lewis.
Secretary	G. R. W. N. Luntz.
Committee Members	W. R. Hall, D. Forbes and J. E. Pugh.

I should like to remind newcomers to the Hospital that they are particularly invited to attend the New Gymnasium for coaching, where, on Tuesday, Wednesday and Friday afternoons, the services of Matt Wells are available to all students keen on learning to box. Added significance attaches to hospital boxing, in that it is hoped that Inter-Hospital tournaments will be revived. The Guy's team have won the competitions on the past two occasions, and if the Club is to remain the leading London hospital boxing club, it is up to newcomers to support the Club and avail themselves of the excellent facilities now provided. So roll up and learn how to fight.

Yours, etc.,
GEORGE R. W. N. LUNTZ.
Hon. Secretary.

The Medical School,
London, S.E.1.

Reviews

Textbook of Histology. By E. E. HEWER, D.Sc. Published by Heinemann & Co. Second Edition. *Price* 17*s.* 6*d.*

THE first edition of this book was reprinted twice between 1937 and the beginning of the War, and a second edition has now been produced. It is written for medical students by a teacher of medical students—and a large number of them have quite rightly been reading it.

The excellent microphotographs are explained and certain features of the tissues demonstrated in greater detail by fine simple diagrams, and these are so well arranged that the text referring to them occurs on the same page—surely an extraordinary occurrence in medical books.

The text itself is easy to read and sufficiently detailed; the sections dealing with the reactions of each tissue to various conditions are very helpful to those who will be studying pathology within a short time; and the appendix not only contains a short account of histological technical methods, but also explains how they act.

E. R. D.

Textbook of the Practice of Medicine. Edited by F. W. PRICE. Published by Humphrey Milford, Oxford University Press. 6th Edition. Pp. 2032. *Price* 38*s.*

PRICE'S *Medicine* is so well known as to need but little introduction. The editor is to be congratulated upon the appearance of this new edition after two years of warfare.

Even more is he to be congratulated upon having avoided the temptation of inserting the premature and uselessly incomplete appendix on war medicine or medicine in the Forces that attracts so many authors to-day. The book remains a staid and sober but entirely sound exposition of medicine as taught and practised in London. Revision of the text has been thorough and the innovations presented are chiefly details embodying the most recent but well accepted advances in medical practice. The section on electrocardiography has been extended and improved, the sulphonamides receive adequate consideration and the use of the newer insulins is well described. In spite of numerous other valuable additions the section on diseases of the respiratory system remains definitely below that of the remainder of the book. In general, the closeness of the print and the absence of illustrations makes this a difficult book to read, but in regard both to the worth of material presented and to its clinical accuracy this remains the foremost English textbook on the subject.

Disorders of Blood Pressure. Edited by Sir HUMPHREY ROLLESTON, BT., and ALAN MONCRIEFF. Practitioner Booklet Series. Published by Eyre & Spottiswoode, 1942. *Price* 6*s.*

THIS little book is a symposium of six separate articles by different authors dealing with various aspects of disorders of the blood pressure. The outlook is essentially practical and clinical, main emphasis being laid on the measurement of blood pressure and the significance of its variations, the clinical recognition of various forms of hypertension and the rationale of treatment. The views expressed are thoroughly up to date and, by the avoidance of detailed discussion about the pathology and ætiology of these conditions, it has been possible to present a clear and uniform exposition of the subject. This booklet is an admirable one for the general practitioner; it may also be recommended to the student as a mode of restoring his sense of proportion in regard to this important subject, which is so often distorted by the memory of one or two cases of malignant nephrosclerosis that he has seen and by long and confusing discussions upon the differential diagnosis of this condition from chronic glomerular nephritis.

Cerebrospinal Fever. By DENIS BRINTON. Published by E. & S. Livingstone, 1841. Pp. 163. *Price* 8*s.* 6*d.*

THIS is a short monograph dealing with the epidemiology, pathology, course, symptoms and treatment of epidemic cerebro-spinal fever. Emphasis is laid upon the mode of spread of the disease and upon the importance of carriers and of overcrowded sleeping conditions; upon the essentially septicemic nature of the fever in its early stages; and upon the differential diagnosis from other conditions. Treatment is considered in very great detail and a thorough review is given of chemotherapy in all its aspects, particularly with regard to early and adequate dosage. It seems a pity that four plates should have been devoted to sulphonamide eruptions and not one to the rash of the disease itself, but in all other details the book gives a comprehensive account of a disease whose early recognition is of supreme importance in wartime.

Gynæcology for Nurses and Gynæcological Nursing. By Sir COMYNS BERKELEY, M.D., F.R.C.P., F.R.C.S. Published by Faber and Faber, Ltd. *Price* 8*s.* 6*d. net.*

THE eighth edition of this useful book will be welcomed by the trained nurse and the nurse still in training. The revision of subject-matter has brought it up to date, and much that is new is included within its covers.

The chapter on Blood Transfusion, also that dealing with X-rays and Radium, deserve special mention, as they deal with subjects on which the nurse is often somewhat hazy unless she is lucky enough to have had special experience.

Chapter XXVI is the first of several chapters dealing with the preparation of the patient for operation, and the aseptic technique, including clear and concise instructions for the theatre sister or nurse in hospital or private house; this is followed by details of post-operative care. The diagrams are clear and illustrate the subject well, and the test questions at the end of the book will help the reader to test her own knowledge. It is a book worth recommending both for its interest and usefulness.

M. G. S.

The Practitioner Handbooks. Edited by SIR HUMPHREY ROLLESTON, BART., and A. A. MONCRIEFF, Published by Eyre & Spottiswoode, Ltd., 1941. "Modern Therapeutics." Pp. 365. *Price* 16*s.* "Law for the Medical Practitioner," by D. HARCOURT KITCHIN. Pp. 376. 15*s.*

THESE two recent additions to the series of *Practitioner Handbooks* admirably maintain the standard of their predecessors. "Modern Therapeutics" consists of a symposium of some twenty-four sections, each by a separate author and dealing with a separate group of drugs. The advances of modern chemotherapy have developed side by side with an almost equally rapid advance in certain other aspects of therapeutics. Although

paper shortage has delivered the general practitioner from the scourge of proprietary medicine literature, he still has the difficult problem of evaluating which of the new drugs and methods of therepeutics that are described so often in the journals do represent a real advance on his previous knowledge, and which will prove to be but a flash in the pan. In this book, a well-considered account is given of modern practice in various branches of therapeutics, written for the general practitioner as opposed to the specialist. As such it is a very valuable book, well written and clearly printed; the text is sound although in some details the practice advocated differs from that taught in this Hospital.

"Law for the Medical Practitioner" is a handbook which deals with some of the more important aspects of English law that concern the general practitioner. Its greatest value is naturally to the newly qualified man, with little experience of general medical practice and with but a sketchy memory of medical jurisprudence as one of the duller aspects of Forensic Medicine. The subject-matter is not comprehensive, State medicine and panel practice being purposely left out of consideration, but most of the commoner aspects of medicine and the law as it affects the general practitioner receive attention. In particular, the practitioner's duties and his rights, certification, evidence before various types of courts, the medical defence societies and the business side of medical practice are some of the sixteen subjects that receive attention. The book is clearly written and is easy to understand; it will repay careful study by anyone commencing to practise whether it be in general practice or in public or hospital appointment and may be thoroughly recommended.

Diseases of the Nervous System. By F. M. R. WOLSHE. Published by E. and S. Livingstone. Second edition. 1941. *Price* 12*s.* 6*d.*

THE second edition of this book follows the general plan of the first, with some expansion of certain sections and the addition of several diagrams.

There is an introductory chapter which describes the basic disturbances of function and the influence of basic factors on these disturbances. Stress is laid upon the fact that "disease has an existence in time as well as in space." The second chapter of the first section of this book consists of a discussion on the general aspects of the motor and sensory systems.

In the second section the more common diseases of the nervous system are described systematically. Tumours, abscess and subdural hæmatoma are grouped together, the condition of raised intracranial pressure being considered generally first. In this the explanation of the mechanism of symptom production is not completely convincing Vascular disorders are also grouped into one chapter. Though, perhaps, slightly confusing at first, the contents of these two chapters become much clearer after a second reading.

In the chapter on disseminated sclerosis, stress is laid upon the need for knowing the clinical course of the disease if an early diagnosis is to be made.

The consideration of the muscular atrophies is prefaced by a description of the factors of use in the differentiation of the members of this group. The value of treating the muscular atrophies with vitamin E preparations is completely denied.

The chapter on psychoneuroses is of value for the purpose of differential diagnosis

At the end of the book is a scheme for the examination of the nervous system.

The numerous small diagrams of transverse sections of the cord showing the positions of the lesions in various conditions should help considerably in forming a mental picture of the pathology.

The M.B., B.S. Finals. By F. MITCHELL-HEGGS. Published by J. and A. Churchill, 1941. *Price* 7*s.* 6*d.*

THE second edition of this book contains a collection of the papers set at the Third London M.B., B.S. examination between 1925 and 1940, and, in addition, extracts from the regulations for this examination.

The book is well bound and printed on excellent paper and teachers of medicine and medical school libraries will find it very useful and worth its price. The author, however, expects it to be read by London University students, and one cannot help feeling that it would have been more desirable to publish this book in a less luxurious shape and at a more reasonable price.

W. G. T.

Handbook of First Aid and Bandaging. By BELLIOS, MULVANY and ARMSTRONG. Published by Baillere, Tindall and Cox, 1941. *Price* 3*s.* 6*d.*

THE above book is the most helpful and simply written handbook I have yet read; it is concise and practical, and should prove a real boon to civilians and first-aid associations and parties. Its points are clearly defined and explained and, when necessary, illustrated. No one should at any time be without such a complete guide to first aid. I know of no other which teaches so much in so few simple, helpful words.

S. N.

Acute Injuries of the Head. By G. F. ROWBOTHAM, B.Sc., F.R.C.S., with a foreword by NORMAN M. DOTT, F.R.C.S. Published by E. and S. Livingstone, Edinburgh. *Price 25s.*

THIS book is a thoroughly sound treatise on head injuries and should be read by all who may be called upon to undertake the responsibilities of casualty surgery. It is the exposition of a specialist trained in neurosurgery, yet apart from the description of certain highly specialised operations its subject matter is ideal in truly representing the application of basic surgical principles to the pathology, diagnosis, treatment and prognosis of head injuries.

The book is divided into seven chapters. Those on the mechanisms and on the pathology of head injuries make fascinating reading. Those on the results of injury to special parts of the brain and on the sequels of head injuries are equally interesting. It is, however, on the practical aspect on the subject that the book excels. The chapters on diagnosis of closed head injuries, on the indications for surgical treatment and on the detailed treatment of closed and open wounds of the head are in themselves a work of reference which no young surgeon should be without.

It is particularly refreshing at last to see the subject of extradural hæmorrhage in its proper perspective, as distinct from the grossly disproportionate space usually allotted to it in surgical textbooks. It is an untold joy at last to find a neurosurgical work which does not glorify the ritual of operations lasting half a day.

S. H. W.

Anatomy and Physiology for Nurses. By GORDON SEARS, M.D. (Lond.), M.R.C.P. (Lond.). Published by Edward Arnold & Co. *Price 6s.*

IT is difficult to criticise this book adversely in any way apart from noting a few printing errors, which, no doubt, have already been dealt with. Dr. Sears is to be congratulated on understanding the needs of nurses in these subjects, in relating the facts to their practical work whenever possible, and in presenting the subjects so clearly, completely and scientifically. We are glad that it is a Guy's man who understands so well the nurses' standard of knowledge and point of view. One is glad to see the influence in his writing of the teaching he himself received in the Medical School. We thank Dr. Sears and the publishers very much for producing such an excellent book at so reasonable a price. It will become as popular amongst Guy's nurses as the already well-known *Handbook of Medicine for Nurses* which Dr. Sears wrote a few years ago.

H. M. G.

The Nursing Couple. By M. P. MIDDLEMORE, M.D. Published by Hamish Hamilton, Ltd. *Price 7s. 6d.*

AN interesting and original work which leaves in some way a pleasing flavour behind, as if the authoress had had a personality which was both intelligent and agreeable. The first part of it consists of an accurate and painstaking observation of the behaviour of infants at the breast, evidently undertaken with loving care and much patience. An attempt is made to divide the subjects up into groups according to their behaviour, but this, perhaps, is hardly wise, as the numbers are too small; besides, it is a process that seems out of harmony with the individualist trend of the book as a whole. With the conclusions that are drawn no one will quarrel, but the real value lies in the beautiful and accurate studies of this august natural function, which are unlike any I have met before.

In the second part breast-feeding is studied objectively from the mother's point of view; and it is not before it was time that a woman did this, for women, as a rule, are dumb as fish about their own functions. She has made it plain that breast-feeding is an enjoyable process, and that if artificial rules and regulations interfere with the enjoyment, it is not the enjoyment that must go but the rules and regulations. I heartily commend this view, share it myself and am delighted to see it proclaimed. Excellent psychological reasons are given for maintaining that in breast-feeding this is the right view and that the old authoritarian notions may have disastrous after-effects. It is with great regret therefore that we learn from the preface that the gifted authoress is dead. This preface, from another hand, is rather tiresome, but readers must not be put off by it, nor by the cold title, *The Nursing Couple.*

H. S. H. V.

Oral Tests. By FELICIA NORTON, S.R.N. Published by Faber & Faber. *Price 2s.*

IT would be dangerous to put these oral tests into the hands of candidates for the Preliminary State Examination of the General Nursing Council without a warning that the standard of answer here indicated would hardly satisfy the examiners. Perhaps there is a type of poorly-educated candidate who aims at learning by heart how to answer a few simple facts in all the required subjects. But any educated girl who is aiming at a high standard of knowledge and an intelligent grasp of the subjects could not be recommended to spend 2*s.* on this book. The inaccuracies and inadequacies of the answers are too numerous to mention.

H. M. G.

Architectural Principles in Arthrodesis. By H. A. BRITTAIN, M.A., M.Ch., F.R.C.S., with a foreword by HARRY PLATT, M.D., M.S., F.R.C.S. Published by E. and S. Livingstone, Edinburgh. *Price* 21*s.*

MR. BRITTAIN holds the view that a free bone graft is an essential part of any operation designed to produce an arthrodesis. Like all other orthopædic surgeons he has been disappointed with the results of many of the classical operations, and this monograph is written because he feels that in many cases the failures are due to the application of faulty mechanical principles.

The indications for arthrodesis and the causes of failure are first discussed. The architectural principles involved in producing sound joint fusion by the extra-articular method are then detailed. The application of these principles to the individual joint follows in a series of beautifully illustrated chapters. With each chapter is included a collection of radiographs showing the results obtained.

The monograph is produced in magnificent style and makes interesting and stimulating reading. Its theme is sound, for it has long been recognised that orthopædic surgeons would benefit from serving an apprenticeship to a carpenter, and nothing could be more logical than that their efforts to produce an arthrodesis should be based on sound architectural principles. S. H. W.

Accidental Injuries. By HENRY H. KESSLER, M.D., Ph.D., F.A.C.S. Published by Henry Kimpton, London. Second Edition. *Price* 45*s.*

THIS book is an account of the medico-legal aspects of workmen's compensation and public liability. After an historical review of the period leading up to the introduction of the Compensation Laws the current laws in the individual States are discussed together with the application of the medical aspects of the problem. General methods of rating disabilities are described and the imperfections of these methods are well brought out.

The pathology and end-results of trauma are then considered. A discussion on the general principles underlying disability is then followed by full accounts of the results of injury in all the various parts of the body. There are excellent chapters on the relation between injury and disease, on occupational disease and on accident neurosis. The final chapter deals with the important subject of rehabilitation.

The book will form an admirable work of reference for all concerned with industrial medicine and surgery. S. H. W.

Operating Room Procedures for Nurses. By JEAN D. JOLLY, S.R.N., S.C.M. Published by Faber & Faber. *Price* 4*s.*

THIS is a useful and practical handbook. One sees at once that the author is an experienced theatre nurse. Facts are clearly stated and instruction in theatre duties are given explicitly and with authority. The information, if anything, is rather sketchy and could do with some supplementing. One would appreciate more details of drainage tubes (no mention of glass ones), needles and sutures, with good illustrations of the various types. The information on anæsthetics is good so far as it goes, but is insufficient (*e.g.*, avertin is mentioned, but no details of how it is given and tested, or the particular observations which the nurse is required to make). The nurse is warned, when preparing an anæsthetic trolley, to use the greatest of care when filling up drop bottles from stock anæsthetics. Many anæsthetists and nurses think that the responsibility of doing this should not be put upon the nurse, and that the anæsthetist should fill his own bottles. If they require refilling whilst an operation is in progress, a nurse may, of course, do this, under his instructions and observation. Good pictures are given of the more uncommon instruments and apparatus, but there is room for more generous illustration all through the book (hoping, of course, that the price would not need to be much increased).

H. M. G.

Hospitals Under Fire—But the Lamp Still Burns. Edited by GEORGE C. CURNOCK. Published by Allen & Unwin, Ltd., London, W.C. 1. *Price* 7*s.* 6*d.*

THIS interesting book contains a series of stories told by victims of the air-raids on London during the Autumn and Winter of 1940–41.

Edited by Mr. George C. Curnock (journalist and Press officer to the Westminster Hospital). The book has sixteen chapters well illustrated with thirty-two photographs, and vividly tells what the London hospitals and men and women of all classes endured and how they carried on during those difficult months.

In addition, it includes a graphic account of the great fires around our own Hospital (Guy's), which narrowly escaped destruction on the night of December 29th, 1940.

The book will be read with interest and in years to come enable posterity to realise with pride how the London hospitals faced the onslaught of 1940–41. S.

Sport

Rugby

GUY'S *v.* BEDFORD.

(Played at Bedford on Saturday, March 14th.)

GUY'S visit to Bedford is always very pleasant and a hard game is usually in store. This game was no exception. Bedford had a very useful side, with Kynaston, an ex-captain of Guy's, in the three-quarter line, and a solid pack. It was not a game of the highest class, and no doubt the enforced rest since Christmas found our players short of practice. The home pack were a great deal better than Guy's, obtaining the ball from most of the scrums, and surprisingly bustling our fast forwards in the loose with their vigour, although Guy's carried out some excellent movements in the open.

In the earlier stages of the game Bedford forwards won territorial advantage by spirited work in the loose, and although Guy's backs did not have many chances they always looked dangerous. Bedford scored twice in the first half. Following a forward movement Sinclair picked up neatly, and sent in Hook for a try between the posts which Hawkins unaccountably failed to convert. Hook scored again by following up a misdirected attempt at a drop by Kynaston and again the kick failed.

Breen-Turner broke away early in the second half and kicked ahead over Bedford's line, beating Brown for the touch-down quite easily, but Mullins failed with the kick. Bedford increased their lead when the slightly-built Hook took a pass from Kenney, who had broken on the blind side, and scored under the posts for Kynaston to convert.

Harris came into the picture when he sent Bedford back with a lengthy kick to touch. Guy's attacked strongly, and when Bedford tried passing behind their own line Mullins came up to show them their error, and scored a try which he failed to convert. A movement by Bedford with Rogers prominent was halted, but the ball went speeding along the three-quarter line in the next minute and Hook ended a good day's work with a try in the corner.

Guy's showed plenty of fight but looked a tired side; with only a few minutes left for play Strathie dropped a good goal to make the score look respectable.

Score: Guy's, 1 dropped goal, 2 tries (10 points); Bedford, 1 goal, 3 tries (14 points).

Team.—E. K. Harris; R. F. Camp, D. M. Strathie, P. L. Brangwin, A. C. Macrae-Gibson; W. L. Lillywhite, N. I. Scott; B. H. Wilshere, A. B. Lee, R. G. L. Brittain, A. G. Albers, J. R. C. Matthews, T. W. Renton, J. Breen-Turner, M. R. Mullins (captain).

GUY'S *v.* ST. MARY'S

(Played at Honor Oak Park on Wednesday, March 19th.)

OWING to the hard state of the ground this game was postponed from the original date. Although Guy's beat Mary's earlier in the season at Teddington, Mary's were without their famous pair of halves—Kemp, the English International stand-off, and his scrum-half partner, Cockburn. This time there were no representative games to hamper the team selectors, and both sides were at full available strength, with the exception that both full-backs, Lewis (Guy's) and Campbell (Mary's) were absent, in addition to Forbes (Mary's hooker).

Guy's beat Mary's again and, on the run of the play, deserved their victory. Much of the credit must go to Mullins, who was mainly responsible for keeping Kemp in check. Whenever Kemp had the ball Mullins was his shadow, and saw to it that Kemp was put on the ground, in addition to which, Lillywhite formed a sound second barrier. Mullins led his pack magnificently, proving conclusively what a great captain and tactician he is. Indeed, if it is possible to draw comparisons, at the risk of contradiction and controversy, it is doubtful whether a Guy's XV has been led by such an inspiring figure since the peerless W. D. Doherty, and this is no reflection on the great captains of the past twenty years.

Guy's forwards were splendid, holding their opponents in the tight, were faster and livelier in the loose, and never hesitated to go down on the ball to stop forward rushes. The three-quarters had many fine movements which would have brought tries had their opponents not marked and tackled well. A word of praise must be given to Harris, who came through such an important game with credit, very cool and steady under pressure.

Neither side attacked for any length of time as play ranged from end to end with swift passing between the three-quarters, and sound rushes by the forwards. Mary's backs handled and passed neatly, but all their movements were forced out to the wings where they fizzled out. The path down the middle was completely barred, thanks to the watch on Kemp.

Soon after the kick-off Strathie just failed with a dropped kick. Mary's attacked, but Lillywhite cleared to touch half-way, and followed with a grand tackle on Kemp. Vasey made an unsuccessful drop and Guy's indulged in some short passing, but could not break through. Kemp resorted to kicking ahead and to touch, as he could make no opening against the tackling of Mullins.

After twenty minutes' Guy's forwards carried play to Mary's half, the ball came out to Brangwin, who landed an excellent dropped goal to give Guy's first blood. Mary's attacked and made headway with a kick to Guy's "25," Mullins relieving a dangerous situation by finding touch as Guy's fumbled on their line. From a line out by the corner flag Johnston caught the ball and touched down for an unconverted try for Mary's.

Guy's backs had a neat passing movement, and Camp, on receiving the ball, cross-kicked and Lee tackled the full-back in possession. Two five yards scrums followed but Mary's scrambled the ball away.

Following the interval both sets of backs indulged in some neat passing, but the tackling prevented all attacks from developing. Matthews made a grand dribble almost to Mary's "25." Guy's forwards followed up and, from a quick heel, Renton picked up and passed out. The ball came right along the line to Camp, who neatly side-stepped one opponent and touched down in the corner.

Mary's made a fierce onslaught with forward rushes and, following two scrums on Guy's line, Kemp forced himself over near the posts by sheer weight for a try, which Twining failed to convert. Macrae-Gibson brought off some wonderful tackles to stop his opposite number. Guy's advanced to Mary's "25" and Mary's were penalised for not playing the ball. The kick was taken by Mullins, who placed Guy's in a good position by kicking the goal.

Both sides attacked in turn with Kemp trying kicks ahead, and once went close with a dropped kick. Near the end Lillywhite found touch on the opposite side of the field and Guy's three-quarters had another nice movement which ended in a dropped pass. No side was

called and nobody can deny that of two very fine sides Guy's were the better on the day's play. In such a grand game no individual can be singled out, as they all played first-class rugger.

Score: Guy's, 1 dropped goal, 1 penalty goal, 1 try (10 points); St. Mary's, 2 tries (6 points).

Guy's Team.—E. K. Harris; R. F. Camp, D. M. Strathie, P. L. Brangwin, A. C. Macrae-Gibson; W. H. Lillywhite, N. I. Scott; B. H. Wilshere, A. B. Lee, R. G. L. Brittain, A. G. Albers, J. R. C. Matthews, T. W. Renton, J. Breen-Turner, M. R. Mullins (captain).

GUY'S *v.* ST. THOMAS'S.

(*Played at Guildford on Saturday, March 21st.*)

FOLLOWING the splendid win over St. Mary's during the week, Guy's fell from their high estate by allowing themselves to be stampeded into innumerable errors by the bustling tactics of St. Thomas's forwards. The three-quarters were not given any room to manœuvre and the forwards were unable to turn to advantage their speed in the open. Perhaps three games in eight days did not agree with the team.

The ground seemed on the small side, and Guy's played up the slope first half. Ritchie was early in the picture with a splendid attempt to drop a goal, and later made a long and accurate kick to touch. St. Thomas's forwards kicked ahead over the Guy's line and everybody hesitated, except Jackson, who dashed across to touch down for a try, which Ritchie converted.

First Strathie, and then Brangwin, made efforts to break through, but St. Thomas's returned to the attack and Guy's were very lucky when Parry-Jones knocked on in front of the posts. Guy's continued on the defensive and twice the danger was relieved by Strathie and Lillywhite finding touch, but St. Thomas's almost scored again from an intercepted pass.

Mullins caught Ritchie in possession in St. Thomas's "25," which was followed by Renton dribbling over the line, but Ritchie recovered and got the touch down. Things looked awkward for Guy's when St. Thomas's backs indulged in two combined movements, but dropped passes came to their rescue. Towards the interval Guy's had more of the play, and Mullins was tackled immediately as he took a pass from Breen-Turner. A movement by Lillywhite and Strathie ended in a knock-on under the posts, and St. Thomas's had a kick from a mark. A try almost came to Camp, but he was tackled only a few yards from the line.

Following the interval Guy's had difficulty in holding St. Thomas's forwards and Jackson was just beaten for the touch down. Following the drop-out Guy's were penalised and Ritchie landed a goal from an easy position. Guy's came more into the picture when Strathie broke through and cross-kicked, but nobody could gather the ball, but again Strathie tried to open up the game only to see a promising movement spoilt by a knock on. Mullins and Lillywhite both tried drop kicks which were charged down, and following this, Macrae-Gibson dribbled, gathered from the bounce, the ball travelled right across the line, but ended in touch. A St. Thomas's man, suspiciously offside, intercepted a pass from Scott to Lillywhite, but he was tackled at once.

Although Guy's were now having the best of the game they could find no opening against determined tackling. Lewis came into a three-quarter movement, but still Guy's could not get a man over. Scott tried to barge through and got close to the line before being downed, and another movement by the backs broke down on the touch line. A try came to Guy's as the result of some snappy passing between Strathie, Camp and Wilshere, and the latter ran round to the posts for a good try, but Mullins's kick was touched in transit.

A great effort was made to save the game. Lewis kicked accurately to St. Thomas's "25," which was followed by Camp making a fine run, but his cross-kick ended in a scrum. Lewis came up to take a pass from Brangwin, but was tackled vigorously, and a scrum on St. Thomas's line ended in a drop-out, and in the closing stages Mullins just missed with a penalty kick.

Score: Guy's, 1 try (3 points); St. Thomas's, 1 goal, 1 penalty goal (8 points).

Team.—T. L. T. Lewis; R. F. Camp, D. M. Strathie, P. L. Brangwin, A. C. Macrae-Gibson; W. H. Lillywhite, N. I. Scott; B. H. Wilshere A. B. Lee, R. G. L. Brittain, A. G. Albers, J. R. C. Matthews, T. W. Renton, J. Breen-Turner, M. R. Mullins (captain).

Hockey

GUY'S *v.* WESTMINSTER HOSPITAL.

(*Played at Burntwood Lane, on Saturday, March 21st.*)

Won 7–0.

THIS was a fast and enjoyable game and, apart from a short period in the second half when the Guy's forwards proved irresistable, play was fairly even.

Although Westminster had only four forwards for the first ten minutes, the ball moved rapidly from end to end, both sides getting in several shots. The goalkeepers were sound, however, and it was not till late in the first half that Guy's scored. Our opponents failed to clear hard from a melée in the circle, and Parr, waiting on the edge, sent a rising shot into the corner of the goal.

Shortly after half-time Khong ran in from the left wing, his shot rebounded off the goalkeeper's pads, and Burt was able to push the ball over the line. This proved to be the first of four goals, all scored in under ten minutes. The next came when a shot from Trethowan, following a corner, was helped into the net by Dimock, who had been waiting near the goal mouth. From the bully-off the ball went to Trethowan, who sent a nice through pass to Thompson; he centred hard, and Saunders's shot gave the goalkeeper no chance. Westminster now attacked with spirit, but a good clearance by Prideaux was collected on the half-way line by Burt, who dribbled past two men and ran around the goalkeeper to score a good individual goal.

Westminster continued to attack spasmodically and often looked dangerous, giving the Guy's defence plenty to do. They stood up to the test well and before the final whistle Burt and Saunders brought the Guy's total to seven.

As mentioned above play was more even than the score suggests. Our inside forwards were allowed too much freedom and Burt especially took the chance thus offered. The covering of the halves and backs has contributed largely to our success in many matches, and this game was no exception.

Team.—D. J. Rayner; B. H. Prideaux, E. A. Glover; J. R. Dimock, J. G. Richards, P. T. Parr (captain); G. Thompson, J. D. Trethowan, J. R. Burt, D. R. Saunders, K. Y. Khong.

The Boat Club

ON Saturday, March 28th, the Boat Club met Westminster Hospital at Putney and raced over a mile course from the Mile Post to the University Stone.

The fact that a sharp easterly wind blowing upstream made the water choppy for the last half-mile did not seem to upset either of the crews, the bladework being very clean throughout.

Guy's, losing the toss, had the disadvantage of the bend and, both crews getting away to a good start from Mr. Griffiths, of the Vesta Rowing Club, settled down quickly. Westminster soon took the lead and, on entering the bend, were a canvas ahead, this lead being increased to half a length at Beverley Brook. A "ten" was called for by T. D. Birtwhistle and the crew, admirably stroked by Wiggins, responded well to reduce the arrears to quarter of a length. In reply, Westminster took a "ten," which, however, did not have much effect, but a further spurt did give them a slightly increased lead. Birtwhistle called on Guy's for a further effort, which was immediately forthcoming, and during this spell the crews drew level. This was followed by yet another call, which saw Guy's draw steadily away for the last quarter-mile to win a hard but very enjoyable race by three-quarters of a length.

The Guy's Eight rowed extremely well in spite of little training, and the result of the first inter-hospital race of the year is most gratifying.

We wish to take this opportunity of thanking the Vesta Rowing Club, with whom we now boat, for their invaluable help.

Crew.—Bow, H. Freeman (captain); 2, D. Hone; 3, P. Cremin; 4, J. Buxton; 5, J. Dyson; 6, T, Collins; 7, G. S. Chase; stroke, A. Wiggins; cox, T. D. Birtwhistle. H. F.

The Hare and Hounds Club

THE Inter-Hospitals was run off on Saturday, March 14th, from the "King's Head," Roehampton, over a 4½-mile course on Wimbledon Common. The event was this year combined with the London University Inter-Collegiate Cross-Country Championship, and resulted in a win for Guy's in both matches.

Five hospitals and three colleges were represented in a field of about forty, though not all these teams closed in.

After the first dash down the rides to the towpath by Beverley Brook competitors began to manœuvre for positions on the "Toast Rack," and here the order of the Guy's team was: Martin, Still, Woolcott, Griffin, Rosen. Towards the end of the towpath Still very wisely started to make his effort and passed Martin and Abbott, to gain a position which he maintained over the Common home. Griffin, taking advantage of the hardest point of a course which is far too light for his style of running, gained several places on the "Toast Rack," a narrow, sandy track of about five furlongs leading up from the brook to Wimbledon Common.

Owing to the difficulties of raising separate teams Hospitals and Colleges have united for the duration under the name of London University Tyrian Club, and matches have been held during the past season against Oxford and Cambridge and many London clubs. In these events Guy's men have been regular participants, but most of the present club will be qualified, or nearly qualified, by next season, while there is little participation by the newer men. It is to be hoped that enthusiasm will be aroused, for Guy's has a greater Cross Country tradition than any other London hospital; and the country around Sherwood Park is excellent for training or racing.

Results.—Inter-Hospitals: Guy's, 20; University College Hospital, 47; London, 53. Guy's Team: H. C. Still, 1; H. C. Martin, 2; B. P. Griffin, 4; R. Woolcott, 5; M. C. Rosen, 8.

Inter-College: Guy's, 28; University College, 32; Imperial, 34; University College Hospital, 55; London, 71. Guy's Team: H. C. Still, 2; H. C. Martin, 4; B. P. Griffin, 10; R. Woolcott, 12.

H. C. MARTIN.

Hospital Information, etc.

Notice

EXAMINING BOARD IN ENGLAND

BY THE

ROYAL COLLEGE OF PHYSICIANS OF LONDON

AND THE

ROYAL COLLEGE OF SURGEONS OF ENGLAND

Notice is hereby given that the Royal College of Physicians of London and the Royal College of Surgeons of England have, on the recommendation of the Committee of Management of the Examining Board in England, determined that until further notice—as a war emergency measure only—candidates be admissible to the last subject of the Final Examination for the L.R.C.P., M.R.C.S. diplomas on the production of evidence of having completed thirty months of recognised clinical study, provided that they are able to produce all the other certificates required by the regulations.

The present emergency regulation permitting a candidate to enter for one Part of the Final Examination after twenty-four months of clinical study is not affected, and remains in operation.

Papers by Guy's Men

Gillespie, R. D. German Psychological Welfare. *Brit. Med. J.*, 1942, i, 445.

Howitt, Frank, and Another. Army Physical Development Centre. *Lancet*, 1942, i, 373.

Leader, E. A. A dental revolution. *Brit. Dent. J.*, 1942, **72**, 153.

Siggers, N. A. A method of local Anæsthesia for conservative dental surgery. *Ibid.*, 164.

Appointment

P. W. L. Camps, F.R.C.S., appointed Examining Factory Surgeon.

Astley V. Clarke, D.L., J.P., M.D., Consulting Physician to the Leicester Royal Infirmary has been appointed Sheriff of Rutland for the year 1942.

Births

BEHRMAN.—On March 25th, 1942, at the London Clinic, to Doris (née Engelbert), wife of Dr. Simon Behrman, of 33, Harley Street, W.1—a daughter.

EDS. { N.A.N. H.F.O.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *2nd May* 1942 — *Number* 1403

PASSIM

IT is customary to congratulate successful candidates in the final examinations, especially those who have qualified—a good custom, but eulogy is seldom useful and it is better to consider examinations in general rather than comment upon this one in particular.

The joy of qualifying is reduced by the high fees that have to be paid; there are the statutory five pounds and one shilling, but those who did not take the Conjoint Board's Anatomy and Physiology find they must pay ten guineas in back fees. This is imposed when the victim, hovering between student and doctor, is at his lowest financial ebb, and, anticipating the rewards of registration, in a most malleable condition. It is an extortion to which the newly qualified man submits, not because he approves or agrees, but because he is too tired and glad to struggle further. His success in the intellectual combat leaves him unable to resist what appears little less than blackmail. It is unworthy that two great colleges should enrich themselves in this manner, and make, every year, large sums of money which have cost them no effort and cannot involve any expenditure.

This, however galling, is a small evil; there are larger ones which often pass without a grumble. In Britain and Ireland there are about thirty ways of getting qualified, whose standards are so varied that it is as hard to remember their large assortment of letters as it is to compare their academic requirements. The only method of comparison is by listening to doctors' gossip, and when pride and prejudice have been discounted the enquirer is left astonished that of this conglomeration of degrees and diplomas each should fit a man to practise medicine.

Some universities deliberately maintain a higher standard than the rest; their examinations tend to become less and less suitable for qualification which is usually by diploma. In Cambridge and London, according to Major Greenwood's figures, only about 60 per cent. of those who start out for medical degrees ever get them, and some of these take more than ten years. There should be a national qualifying examination for the whole of Britain, a board to control this could eliminate the uncertain standards and redundant effort of the present system. The examination would only try to ascertain that candidates were capable of working under supervision in a hospital, where they would have to be for at least six months after qualifying. Higher degrees and diplomas would serve, as they do now, to provide for specialisation.

It is hard to see what function the qualifying diplomas perform, except to waste, by duplication with the degrees, the examiner's time and the candidate's money, and giving no advantage except earlier qualification. A man is either fit to practise medicine or unfit and the niceties of professional ability (apart from specialist and higher qualifications) as expressed in this country by an alphabet of letters are confusing, complicated and serve no useful purpose.

▭

WHILE in this mood of complaint there is the soap problem; it is rationed to just under three-quarters of the pre-War consumption. Economies are necessary, but need it disappear almost entirely from the wash-basins in the Pathology Block? For some weeks before rationing was introduced there was no soap. There are concessions for doctors and others whose work involves them in much washing, but even if these do not apply let us have three-quarters of the old ration back. If there is the stringent need for economy the dainty soaps of the film-star complexion-preserving sort can be replaced in the wards and out-patients by honest, yellow, household stuff, so gaining an ounce of soap for each coupon given up and getting, according to Leonard Colebrook, an increased bactericidal effect upon the skin.

Since the preceding words were written another aspect of the soap question has come to the front. When rationing began the hospital staff received in addition to laundry and cleansing allowances, three ounces of soap a month. This was far too little. For the nursing staff it meant that the individual was unable to wash her own stockings and other accessories. This has been put right, but the main abuse remains. The hospitals have told the Ministry of Food, through a spokesman, that the ration is too small, and so far they have received no satisfaction. The bureaucrats are not sure that nursing is a dirty occupation. The hospitals suffer from this pure dunderheadedness, and also from

subtler difficulties. They cannot get the range and quality of the toilet soaps in the shops, because they have no connection with this section of the trade and in war are unlikely to get one. Nurses must therefore be content with soap of one or two sizes and smells. This is not a great tribulation, but nursing is a hard and not very well rewarded occupation: when the Auxiliary Women's Services get their twelve ounces of soap a month and can buy where and what they choose, it makes nursing just a bit harder. It is not extravagance to ensure that nursing and medical staffs and everyone employed in hospitals are encouraged to be as clean as possible; upon this both their own health and that of their patients depends. The Ministry of Food could dispel any scepticism about the nature of the danger in hospitals by looking at the excellent posters on infection by the Ministry of Health. Perhaps the barrage of pathogenic bacteria ejected by one sneeze would convince them that nurses and doctors need an increased soap ration as much as sewer workers and miners.

THE pharmacists have joined the hospital agriculturalists. Their plot in front of the nurses' home, is to be planted with deadly nightshade and henbane, familiar to the erudite as *Atropa belladonna* and *Hyocyamus niger*. The seeds and instructions for growing them were obtained from Dr. Melville of Kew Gardens whose help and advice have made the venture possible. After vernalisation in a refrigerator for some days they are now sprouting on a hospital balcony. The hospital uses between fifty and a hundred pounds of dried nightshade leaf every year for tinct. belladonna; their supplies, which used to be imported from Central Europe, are now becoming exhausted and cannot be replaced. Surely, if the pharmacists are prepared to cultivate the poor soil of the park, the base hospitals and other country hospitals should be able to supply their own needs and spare some for the towns?

Foxgloves would be grown, but the pharmacists have no facilities for biological assay, and there is no chemical method for estimation. A liaison between the physiology department and the pharmacy would remedy this. The common foxglove is found throughout Kent and, if a collection could be organised throughout the Sector, a considerable quantity of leaf could be collected this summer and sent up to Guy's to be dried. The W.V.S., teachers, leaders of scout and guide troops could be asked to help. The leaves should be picked dry and sent up here immediately. There should be a prize for the most successful group, those who collect the greatest weight of leaves in the best condition.

The pharmacists have also made about one hundred-weight of soap from waste fats usually sent to the bone merchant's by the kitchens. This soap is being used to replace the lysol mixture in the floor-cleaning machines. It is a caustic, but efficient. Other hospitals should emulate Guy's and give news of their ways of saving. The pharmacists are always ready to give detailed information about any of their processes.

DR. N. A. NEVILLE has left the hospital for the Royal Navy and has had to relinquish the editorship of the *Gazette*, which he held for two years, the most eventful in history. We wish him good fortune in his new job. His work for the Medical Research Council involved long periods spent in cold baths, a practice which must surely make even the smallest and foulest ship appear luxurious. We hope to hear from him when he gets to sea regarding this question.

Obituary

MARGARET ELIZABETH GOUDGE

MARGARET ELIZABETH GOUDGE went out to Western China in 1919 as a missionary of the Church Missionary Society. After the usual period of language study, she was located to Mienchow (at that time the centre of most of the work of the Mission), the city in which, except for a short spell of work in the Mienchu Hospital, two days' journey away, nearly all her missionary life was to be spent.

In addition to being given responsibility for care of the health of the large number of girls in the Mienchow Boarding Schools and of the women in the Bible Training School, Miss Goudge threw herself with enthusiasm into the development of the small daily dispensary work into a large out-patient clinic, and eventually secured premises in which—in very primitive conditions—it was possible, with the help of a Chinese girl whom she trained herself, to nurse a few of the more serious cases as in-patients. She also built up a large midwifery practice in the city and was the means, under God, of saving the lives of numbers of Chinese women and their babies. All this work had to be carried on without the help or advice of any qualified doctor, the nearest being more than a day's journey distant.

From time to time Miss Goudge was also called to nurse some missionary colleague through serious illness, either in Mienchow or some other station, and they, as well as the Chinese people whom she loved to serve, will long remember her skill and devotion. With her nursing was, indeed, far more than a profession—it was the driving passion of her life. Many were the tributes of affection and gratitude paid by her Chinese friends when, in 1939, she returned to England suffering already from the disease (sprue), which steadily sapped her strength and was the cause ultimately of her death.

I. D. G.

The Social Side of Medicine

A shortened version of a Paper read to the Guy's Students' Socialist Society on 22nd January, 1942, by W. Lindesay Neustatter, M.D., B.Sc., M.R.C.P., with Mr. Lambrinudi in the Chair.

GENTLEMEN,—I have deliberately selected a title for this paper which is misleading, hoping to give the impression that I am going to flit lightly over such delectable topics as cup ties, or even cups of Horlick's in night sister's room, and thus unsuspectingly to lure you on.

For the sociological aspects of medicine has a heavy sound. An œdematous retina resembling a Turner sunset, or an aortic puff like the wind in the trees, have much the fascination of a delicate leg glide or a wristy cut. But though the latter are the high lights of cricket, the essential foundations are the prosaic shots which keep the ball out of the wicket. Similarly in medicine, prophylaxis is far more important than the most sensational therapeutic measures.

It is in this regard that social factors loom large. For where ill-health can be traced to them, enormous scope for betterment appears. How this is to be brought about is a question on which we all have our own ideas; I am sure you have yours.

But, remember, however strongly we may feel —Left or Right—there is no place for politics in scientific observation. Observation must be impartial and objective, and facts recorded, however contrary to our own hypotheses. But we can all have our own views as to what steps need to be taken to make a better world. And there is no disguising the fact that in the name of scientific impartiality, there are many who would like to make this an excuse for preventing doctors, with their unique experience, from taking an active part in criticising existing conditions, using the old cry that to criticise the *status quo* is playing politics.

Social factors in medicine can be considered from three aspects—(1) From their direct effect, *e.g.*, rickets caused by lack of Vitamin D in the diet; (2) from their psychological effect, (*a*) on the individual, *e.g.*, financial worry, (*b*) on groups of individuals, *e.g.*, the causes of the growth of those political weeds which we are now so busily trying to exterminate—though I fear only after having allowed them to grow, because some were so shortsightedly afraid they might lose a few of their own flowers, that they regarded the destruction of other people's gardens with indifference. This last problem may not be a strictly medical one, but it is one that has affected the profession intimately.

1. *Malnutrition.* I have not got up-to-date figures, and they would be artificial at present anyway, but before the War there was considerable evidence of malnutrition. For example, Sir John Orr's Report, worked out on a considerable scale, showed, among other things, that 4,500,000 persons—*i.e.*, 10 per cent. of the population—spent only 4*s.* per head per week on food, all of these receiving less than the minimum requirements stipulated by the B.M.A., which was widely considered a very bare minimum indeed. In a small investigation, but one where I had very able assistance from social services, I found that in Bermondsey, taking families whose gross income averaged £2 5*s.* per week, thirty-five out of fifty families had not the minimum B.M.A. requirements.

Now it is sometimes argued that there is too much ballyhoo about malnutrition, and it is asked what about those who are ill from eating too much? The relevance of the latter contention it is hard to see. For it is no argument against the need for ultra-violet light in preventing rickets, to say that some silly fellow died from overexposure to the sun while basking on the Riviera.

Anyone who has had experience of East End children—as I have fairly extensively—knows that about one-third of them are pale, wizened, and of poor physique, though it must in truth be said that some of these very miserable specimens appear to be fit, or at least free from illness. In connection with the last point, Orr only recently reiterated a wise reminder, that what are required are *optimum* diets which will produce the best possible health, not those which only just stave off overt illness. For example, scurvy is a very rare disease here, but subliminal scurvy in the way of purpuric tendencies may be present. An amusing example of this was quoted to me by a medical officer in the L.C.C., who had to see boys whose parents alleged thay had been excessively caned. After studying the morbid anatomy of the case he would say to the mother: "It is not the master who is cruel; it is you, mother. You don't give your children enough lemons"; almost an argument for abolishing corporal punishment nowadays.

Working-class children are smaller and weigh less than public-school children. Experiments on night-blindness have shown—allowing the deduction to be valid—that there is a Vitamin A defi-

ciency in elementary schoolchildren. At any rate, their night vision improved on cod-liver oil.

Six out of nine Army recruits before the War were rejected as unfit, and the improvement noted in physique after only a fortnight's camp, with plentiful good food and fresh air—and, I presume, Army drill—was quite astounding. Lay, a Fripp Fellow at Guy's, obtained similar results following up children who had left the East End for the country. I have no figures as to the effects of evacuation on town children.

Housing. The social conditions in the slums are still appalling in many places, though much—at least in London—was being done to build new properties. But I have interviewed patients from our own Borough from houses with no water laid on above the ground floor, which are damp and infested by rats; and I gather that the distressed areas were far worse. There is another side to this problem. Modern flats cost some 5*s.* more per week in the North; as a result of the increased rent, M'Gonigle, following up groups of families he knew well, found that ill-health, and even the death-rate, increased in new housing estates because the extra rent came out of what was needed for food. A school nurse told me that many families living in new flats in East London made the same complaint.

Rheumatoid arthritis is a disease which has an interesting sociological bearing. Bad working conditions and fatigue play a large part in producing it. Miss Blackham, a social worker, made a careful enquiry, comparing fifty cases of this disease with an equal-sized control group, and found that those who developed it, worked far longer hours under worse conditions, often in basements, than the controls. A nervous disposition appeared to play a part; at least those with neurosis had a particular tendency to develop the joint variety of the disease.

Individual Psychological Effects.—Any one of you in the wards who cares to go into the circumstances of his patients, will find many cases where economic uncertainty and worry about the future are causing distress, and may be retarding recovery.

On a wider scale I might mention two investigations, one of them being my own made from Guy's. This was an enquiry into the relationship of poor social conditions to the production of neurosis. Comparing groups of fifty families from different social strata my findings, briefly summarised, were:

1. Directly: poor social conditions in themselves do not produce neurosis in children, this in spite of some of the conditions under which they lived being nothing short of scandalous. Only where there was a psychological situation as well did the children tend to be nervous.

2. Indirectly, social conditions affected children through the parents, but generally when the former were nervously predisposed. In adults, however, reactive states of anxiety and depression were caused by unemployment and similar conditions, but again chiefly in those who were nervously constituted. There was more neurosis in a control group of well-to-do children than in the poor ones. Why this was so is not clear; I suspect parental fussiness was commoner in the former.

Psychosis.—As regards this there seems to be evidence of a direct relationship between schizophrenia, alcoholic insanity, G.P.I. and arteriosclerotic psychoses and poverty. This was the conclusion of an investigation in Chicago by Farris and Dunham. The town very conveniently falls into various zones, ranging from slums to a good residential quarter. All the psychoses mentioned were found to be greatest in the worst zone, and remained so even though various populations passed through (Chicago is a migrant city). Manic depressive insanity, which the investigators considered to be endogenous, was a notable exception.

There is, then, some evidence of disease and impaired psychological function, resulting from poor social conditions. And, even though actual neurosis may not be increased, there is plenty of evidence of suffering and worry caused by the strain of living in uncertainty and want. For remember, that though social conditions may not cause actual neurosis, the sufferings of a sensitive and highly-strung individual can be very much increased by bad conditions, and his actual sufferings are not decreased by the fact that he is predisposed to feel acutely. Indeed, the reverse is the case.

Having reviewed some medico-social factors, are there any constructive suggestions which can be made from a purely medical point of view?

A State Medical Service is very much in the air at present. First, it is argued that such a medical service would be of greater public benefit than our present system. Secondly, it would give the general practitioner security and facilities which he does not always possess at present, and would consequently improve his efficiency, and also limit the number of patients he has to see and the hours he has to work. For the specialist there also seems to be a strong case for at least paying him for his hospital service, and for adequate payment for the necessary junior posts. At present "good posts" at teaching hospitals, registrarships, junior appointments on units, etc., carry such a small salary that I have seen a number of exceedingly able younger men refuse to look at them. But in order that they can ultimately earn even sufficient, there must be a scarcity value, and consequently the number of honorary appoint-

ments at hospitals has to be kept down. The result of this is that the unfortunate honorary is grossly overworked. Five hour stretches are not unknown, but no man, however tough, can give adequate service at the end of such a period.

Against it, the arguments show an almost morbid fear of governmental interference and contend that only where there is a chance of profit will the individual give of his best. But is this really so? For example, to the best of my knowledge, Admiral Cunningham and his brother officers do not receive an increased dividend, or even a bonus, for each Italian ship sunk; and yet the Mediterranean Fleet appears to function in a not entirely unsatisfactory manner.

New Zealand has instituted a system whereby the doctor gets a fixed fee from his patient, which the latter can reclaim from the State. This has various advantages. It gets away from the private and panel patient, and, above all, from the many poor patients who are not insured. It means the doctor knows he will get his fee—a not unimportant consideration! It means the patient does not have financial worries when he can least cope with them, and it saves the conscientious doctor the objectionable problem of assessing what his patient can pay, should many attendances be required. The scheme allows that the doctor may charge more, but it is up to him to secure the difference from the patient. This I consider undesirable; it really amounts to selling your services to the highest bidder, not necessarily the *clinically* most needy case.

A certain amount of time, I feel, should be free for private work if you have a salaried service, as a doctor may wish to try out new methods not officially approved, and in attempting to find a better system we do not want to lose the opportunity for trying out new experiments, freedom to do which unfettered has made England such a desirable country.

This question of freedom, by the way, leads to much unclear thinking. For example, you have such preposterous assertions of "freedom" as the contention of the mine-owners who opposed the Factory Acts, which were to limit the working of children of five in mines, on the grounds that such Acts would interfere with the liberty of the subject! Its more modern equivalent is exemplified by the objection to regulations forbidding the sale of certain commodities (I am not thinking only of alcohol) after certain hours. The people who urge this forget that their liberty to shop at any hour can only be secured by curtailing the free periods of those who have to stay at work to serve them at some exotic time. For freedom is, so to speak, a limited commodity, and the larger measure some enjoy the smaller measure is left for others, so it sometimes needs rationing. All our laws curtail some liberties, the less the better. But most important is to resist the Government telling us what we *must* do, very different from being told what we must *not* do.

To return: A State medical service may function better, but even if we reform our medical services to the utmost pitch of efficiency, we must never lose sight of the fact that it still will not meet the problem if, in the words of many practitioners: "We can't give our patients what they need." From the facts which I have briefly indicated there are two main problems which require tackling, viz., malnutrition and housing, and to these I would add adequate provision for convalescence until complete recovery. As regards time for complete convalescence this is a problem which enters especially into the realm of tuberculosis, where a patient, though free from clinical signs, is not 100 per cent. efficient, yet, in order to keep his family, is often forced to return to work under unsuitable circumstances, with a subsequent and consequent relapse of his condition. This particular problem, I understand, has been especially well tackled in Russia.

Housing.—We hope that as a result of the present devastation better housing may result. What is essential, is to see that the pathetic paradox of supplying better housing and thereby lowering the general standard of living because the extra rent has to come out of money which should have bought food, is not repeated. It is an interesting speculation as to how this comes about. It occurs under Labour councils as well as others, who—in theory, at least—should be sufficiently aware of the problems of the poor to know that an extra five shillings per week is a very large amount. Indeed, it arouses the speculation generally of how it is that society, which is made up of essentially decent individuals, tolerates the social evils which exist. (By the way, may I interject that it is a great mistake to assume, as some Left Wing enthusiasts do, that all who are not proletarians are selfish and unscrupulous rascals. Lord Shaftesbury was responsible for the Factory Reforms Act, to take only one example; and Sir Richard Acland, who is a Liberal M.P., and a member of a very old family, has written one of the most constructive books as regards the War and the future, etc.; there is Dr. Hewlett Johnson, etc.)

To continue: How, for example, is one to explain that Earl Baldwin made a gift of hundreds of thousands to the Exchequer, yet his own government allowed the derelict areas to continue? It is very probably our way of looking at things that decides what are essentials. Only

recently Mr. Seebohm Rowntree, in *The Times*, pointed out that the Chancellor of the Exchequer had said that family allowances intended to make certain that children were adequately nourished, could not be afforded at present, and yet tens of millions had been wasted on Government contracts. For firms to make the maximum possible is taken for granted as legitimate business, but that the present and future health of our children is of vital importance is not clearly realised, because there are no glaring instances of starvation, and it is no one's business in particular. I may add, that I have found that when one is working in the East End, one is far more aware of these problems than when one is away from them. It is therefore largely a question of educating opinion, and here the medical profession can throw its weight into exposing social diseases where they exist, and in encouraging and urging the adoption of some scheme such as family allowances. (My own idea would be for the allowance to be made in kind, *e.g.*, the family being issued with ration-cards entitling them to certain essential foodstuffs, to prevent the money being spent on other things, or on foolish foods, such as fish and chips or pickles.) All this can be done independently of political opinion, whether red, pink, blue or chameleon. The abolition of poor health is just as much a question of public health as decent drainage; only as the prevention of typhoid affects everyone, there is a more universal interest in controlling it, than there is in dealing with afflictions which affect others only.

To return to the last heading: the psychological effects of social conditions on masses of people? In my view, where a combination of insecurity, a lack of hope, and a feeling of grievance at unnecessary hardships exists there is a considerable likelihood of social unrest. Static bad conditions appear to have least effect. We know that for a long time many have lived in slums and have suffered from the deficiencies of which I have spoken, yet they remain surprisingly placid. It may be that they are too busy with the struggle for existence to become restless; moreover, it needs a great deal to make people rebel. It may also be a question of temperament. The Celts, for instance, are more apt to become angered by their grievances than the Cockneys. But it is when hopelessness, uncertainty and grievance are mingled, that national movements occur; the most striking recent example being the wane of Nazism in 1931 in Germany with increasing prosperity, and its sudden marked increase when the financial crisis of 1932 produced 7,000,000 unemployed. The study of such movements is a fascinating one, but not sufficiently relevant here to allow me to pursue it further.

However, all these problems, to paraphrase the French, " make one to think." A deplorable habit possibly, but one which, like many luxuries of yesterday, is becoming something of a necessity to-day.

The Machine Age in Medical Science

By Fred Schwite, M.D. (Tex.)

I WAS fortunate to meet that well-known scientist, Aylward C. Tod, Ph.D., in a delightful old-world town which must, for reasons of security, be designated X——. Spring was in the air and on the trees, but I was absorbed in the summer fruition of new discovery which surrounds the remarkable personality of a man who may well go down to posterity as one of the greatest figures in medical science. He has just completed an uneventful Clipper crossing and was full of admiration for the dogged spirit with which he finds these sentinel islands imbued.

Surgery and medicine cannot be said to have kept pace with the age of mechanical advancement which is in progress, and although surgery is not untouched by the machine, it has not yet assumed the importance which is its due. The organisation of the profession is upon a guild or craft basis rather than an industrial one; so it remains to be seen whether the work of Medico-Mechanix Incorporated, under the guidance of Dr. Aylward C. Tod, will encourage the profession to act upon a more scientific basis.

The vast comparator at Manchester University has shown mathematicians throughout the world that the machine is not to be scorned as a most able helpmeet in that most exacting of sciences. It has been the triumph of Dr. Aylward Tod to apply this principle to medical science. In brief, he has perfected a system of diagnosis and treatment to the exclusion of the human element and its inevitable limitations. Impossible though it would be to do full justice either to the potentialities of the machine or the intricacies of its construction in the space at my disposal, it is necessary to give some indication of its evolution and operation.

Dr. Tod, or " A. C.", as he is pseudonominated

by his colleagues, developed what was called the autodoc from a robot used for phrenology, cheiromancy and horoscopes, and so once more in history medicine and magic are associated. Principles long familiar in physico-chemistry, together with much of the newer work in the biologic branch of these sciences, have been combined with a statistical method only lately perfected in Manchester and Nebraska, and thus the correlation of symptoms and the formation of a diagnosis has become possible.

Apart from some references in the American popular press, which aroused lay comment, the fullest account of the machine was in *L'Illustration* of October 7th, 1939, when the invention was submitted to the French Government as an auxiliary to the Medical Services, and, no doubt, to prevent wastage of man-power. Alas, no decision was reached, and in the subsequent disasters the invention suffered serious damage before Dr. Aylward Tod could save it from the brutish might of the barbarian! It is to be hoped that that hostility in U.S. professional circles which was so cramping in its effect was not due to myopic self-interest. Fortunately, one can be confident that such an occurrence is unthinkable in this country and at this time.

An unpretentious-looking three-ton truck conceals the apparatus, which, although it relies upon simple and well-established principles, is of necessity complicated in its technicalities. In contradistinction to the established clinical method diagnosis is made by a synchronised combination of history, physical signs and special investigations. History-taking has been reduced to 79 basic questions and a range of 350 supplementary ones. By incorporating the now familiar lie detector misdiagnosis is guarded against. These data with the relavent physical signs automatically elicited are correlated in the analyser of the machine, an apparatus fundamentally similar to that used in the Finger Print Section, New Scotland Yard, London. The questions are asked by means of reels of film and the photo electric cell as in the sound track of talking pictures. Each question can be answered "Yes" or "No"; any failure to give a direct answer being courteously corrected, in the manner described and used by Professor Tynemann, of Philadelphia, in his "Method of Diagnosis." The essentials underlying these investigations performed by mechanical means will be described later in the treatment section. Suffice it to say that as routine or as the findings may necessitate; laryngoscopy, lumbar puncture, urethroscopy are performed; bacterial or chemical investigations are carried out on pathological material or body fluids. In most cases a series of radiograms are taken on microfilm. Records of investigations, signs, symptoms, diagnosis and treatment are made on a punch card, and these, with the requisite miniature photographs, are filed and kept up to date. Thus a complete and accurate case record is automatically maintained. What a boon in these days of over much clerical work!

An obvious disadvantage is that the patient must always strip for examination, but as this is conducted in complete privacy it should not prove insuperable. Small children, babies and mental defectives are not suitable for the present diagnostic model. However, to demonstrate the flexibility of the machine accurate diagnoses were made upon dogs ranging from bull-terrier to mastiff in sizes, mainly by physical signs, the relevant questions being answered by their owners.

Description of the "surgeon" is even harder. The quite extraordinary complication of the apparatus and the fact that some of the components have been developed in association with secret devices used by the War departments of four great nations effectively precludes any detailed disclosures at the present time. Operations are conducted in bacteria free, filtered and light-treated air, by ten helical-enclosed polyarticulated arms previously steam sterilized. One of these arms carries a small *sensorium*, which controls the other nine. The *sensorium* has a tactile sensitivity eight to nine times greater than that obtaining in the rubber-gloved fingers of the expert surgeon. It is also sensitive to a range of stimuli from light to oxygen tension, and so its selectivity surpasses the comprehension of the human brain. The other nine arms carry an almost unending variety of interchangeable instruments for operations; to two of them ancillary *sensoria* may be fitted. Owing to their shape and size the polyarticulated arms can work in the most constricted space and skin incisions are therefore extremely small. In a host of ingenuities intracutaneous suture so long desired for cosmetic effect demands special mention; it now bids fair to become an accepted practice.

Whilst sparing the reader mere technicalities a few illustrative figures will give a better idea of the construction of the apparatus. Inclusive of armature wiring it uses sufficient wire to reach from Moscow to New York and back again as far as London.

It utilises as much power as a community of five thousand persons. Twenty gallons of water a day are used chiefly in the sterilising and refrigeration plant; this economy is possible on account of the micro-atomising system incorporated.

There are 619 radio tubes, 55 photo electric cells, the majority performing several functions, and a switch circuit more complicated than an automatic telephone exchange.

As far as possible the use of metal has been superseded by plastics, and there is some evidence that the cheerful colours thereby introduced have a stimulating effect upon patients.

The machine as at present constructed is not capable of performing obstetrical operations, neither is it suitable, as yet, for oto-rhino-laryngological work. This is due, Dr. Alyward Tod assures me, to a certain lack of co-operation by the specialists concerned. In cranial surgery, a field where its sure diagnosis and prompt action makes it especially suited, it has carried the field. So successful is it with fractures that a smaller and simpler model is in embryo exclusively for this work.

The machine's speed of action is an immediate recommendation. The latest figures show that over six months the machine could do the work of 27 physicians and 43 Grade I surgeons with teams. These figures may appear small compared with the expectations of the reader, by by regularising the flow of patients through the mechanism of a voluntary hospital and by eliminating the six hours per diem required for overhaul and research upon the machine itself it is hoped to raise the surgeon-equivalent to above 60 and, proportionately, the physician-equivalent.

It should be obvious that unlimited possibilities present themselves. The whole gamut of medico-chirurgical activity may be dealt with by a single operator at a rate hitherto undreamed of. This generation may see the work brought to fruition, but generations yet unborn must strive to reap the choicest benefits. Already such advances have been accomplished as the inclusion of the psycho-adapter, which both analyses and, if need be, reconstructs the personality while a general operation is in progress or independent of the surgeon. Thus the machine performs its work of social regeneration—*mens sana in corpore sano.*

Despite its overwhelming advantages the unprejudiced observer must concede that future generations of medical students cannot receive the liberal education available at a great teaching institution or the clinical sense which is the crux of the healing art from the machine. Dr. Tod is not unmindful of this defect; indeed, he envisages a great theatre in which its actions are shown upon a vast screen. A lecture selected to suit the case is intoned in a voice so modulated that auditory fatigue is reduced to a minimum.

Neither has the lighter side been forgotten; some hundreds of jokes, *bons mots*, etc., all the stock-in-trade of the most brilliant lecturers will be included.

There is no end to this delightful prospect and fruitful field of speculation. In conclusion, let it be said that whatever obstruction Dr. Alyward C. Tod may have suffered in the past he is now to receive full recognition in official quarters. A suitable hospital is being selected for the application of his machine on the mass scale. Would it be too much to hope that Guy's, ever in the forefront of clinical progress and now unhappily deprived of its surgical block, will offer hospitality to this manifestation of twentieth century medical science.

Marriage and the Birth Rate

AT a well-attended meeting on Friday, April 17th, with Sir Arthur Hurst in the chair, Sir Francis Freemantle spoke on the subject of "Marriage and the Birth Rate." After stating that the population of Great Britain will begin to decrease within a few years if the present trends in the birth and death rates continue. Sir Francis pointed out two facts which hide the full seriousness of the situation. Firstly, the full effect on the population of a fall in its fertility does not become manifest until many years later when the number of women of child-bearing age becomes smaller. Secondly, the effect of a rise in the expectation of life, such as we are experiencing at present, upon the Crude Death Rate diminishes progressively owing to the resulting increase in the proportion of old people. Sir Francis estimated that in order to prevent the population from decreasing parents should aim at families of four, so as to compensate for those who fail to marry or are unable to have children. He attributed the fall in fertility to a more selfish attitude to marriage and to life as a whole, and advocated that the citizen should be taught to look upon the rearing of children as a social duty.

Many interesting points were raised by questioners, including the attitude of the State to illegitimate children; the part played by contraception and late marriage in the fall in the birth rate; and the desirability of family allowances. As if in answer to those who view a fall in the population with equanimity on the grounds that quality, not quantity, is wanted Sir Arthur Hurst reminded us that many psychological maladies, particularly in women, arise from the failure to have children. The problems associated with the only child are equally well known.

A superficial view would be satisfied with attributing the fall in fertility in the present century to the rise in the standard of living, and doubtless this has had some effect. But the last twenty years have seen an acceleration of the fall in fertility in association with a rise in unemployment, economic insecurity and a widespread lack of faith in the future. These are all symptoms of economic and social disease, and can best be treated by curing the disease itself.

Correspondence

SECTOR LETTERS.

To the Editor of the GAZETTE.

SIR,—I should like to endorse every word of Mr. W. E. S. Bain's letter in the last issue, on the subject of "meaningless Sector letters." I spent the "happiest years of my life," not at school according to popular theory, but at Guy's from 1921–1929, and I still take the *Gazette* to keep up a valued connection.

It would seem that the Sector letters to the *Gazette* have a two-fold function of considerable importance, which their writers do not appear to have appreciated—first, to maintain that spirit of unity which counts so much to Guy's men and women of all ages; and, second, to give a really practical account of the workings of this enforced experiment, from which we may hope great benefits will ultimately derive.

If their task is viewed in this light, I hope these Sector correspondents will find a new stimulus to their letter-writing in the realisation that they have a wide audience, unseen and scattered to the four winds, to whom "Guy's" is something more than a name, something that has grown to be a part of themselves, and that we are all waiting, eager to know how our own beloved Hospital is faring in these times of stress, how it will arise from its ashes, and what lead it will give us in the "brave new world" towards the foundation of bigger and better health services.

And, since the matter is closely allied, may I add my support to those fortunately many loyal Guy's men who have written so eloquently to plead for the preservation of the façade of the front quadrangle and of the Colonnade.

It is evident that the affection of generations finds expression in this homely beauty. The Arts, of which architecture is the oldest and greatest, are, in fact, the outward expression of the corporate unity of mankind.

May we hope, therefore, that the art of healing will join forces with the other great arts to ensure that England will rise again, bringing the beauty of a great past *into the lives* of those masses, on whose health and work will depend the building of a greater future.

Yours, etc.,
F. C. TOMLYN,
Lieut. A.D. Corps.

To the Editor of the GAZETTE.

SIR,—I feel on opening the next *Gazette* I may see some epistle saying how interesting are the Sector letters. I should therefore like to add my support to W. E. S. Bain's letter. The Sector news is dull and people, like myself, out of touch with the Hospital, rely on the *Gazette* to let us know what is happening at Guy's. I hope I speak for many others in this matter; so, to use an Army phrasing, Sector correspondents please see and take action.

Yours, etc.,
D. W. MAYMAN.

68th Field Regt., R.A.

BRITISH DENTAL STUDENTS' ASSOCIATION

To the Editor of the GAZETTE.

SIR,—At a meeting held at the Manchester Dental Hospital on April 3rd and 4th, of representative students from nearly every dental hospital in the United Kingdom, the British Dental Students' Association was brought into being. The objects and functions of the Association are to represent the Dental Students of the United Kingdom; to promote their educational and social interests; and, further, to improve the Dental Service to the nation.

For the purpose of management and function the representation is in three groups, corresponding to the Northern, Midland and Southern Hospitals.

The occasion of inauguration of the Association was historic in that it was the first on which dental students from the whole of the nation have exchanged views. It is most essential that the combined students' opinions should be available at the time, when planning and reconstruction of the profession and the nation's dental services for the present and the post-war era is so much in evidence.

With this in mind, Guy's dental students are urged to support the new organisation through the Dental Society by lively and vigorous representation and interest.

Yours, etc.,
B. W. PETT.
T. A. MORRIS.

Dental School,
Guy's Hospital, S.E.1.

AVOIDANCE OF PAIN.

To the Editor of the GAZETTE.

SIR,—It takes a great deal to obtain a grunt of pain from the Borough patient—but the grunt is often heard when the surgery dresser puts in his "couple of stitches."

I have found it very helpful to inject some local anæsthetic (without adrenaline) into the cut edges.

I drop a little local on the cut surface, then introduce the needle through the breach in the skin, and infiltrate the cut edge along its whole extent. The same is repeated for the contiguous edge. In a few minutes the stitches can be put in without the slightest pain.

This method may only be applied to recent and clean cuts where the risk of infection is minimal.

The slight extra trouble entailed is well worth while when the patient looks with pride upon his newly-sewn cut and says, "Well, that's a neat job done!"

Yours, etc.,
VICTOR BOCKNER.

Guy's Hospital, S.E.1.

Reviews

Diseases of the Eye. By EUGENE WOLFF, M.B., B.S., F.R.C.S. Published by Cassell and Co., Ltd. Second Edition. *Price* 21*s.*

THIS book has gained a good reputation. It represents a compromise between the brief outline on ophthalmology in the surgical text-books and the larger works on this subject. He is a brave man who attempts to compress his specialty into an attractive book of convenient size; yet the author has carefully avoided the dangers of superficiality and of undue dogmatism, and we can recommend his book as a useful informative work. The text is well arranged with a good index, and the illustrations themselves will repay the study of the reader.

A wide field is covered. The fundus, with its normal variations, is described in detail before the pathological changes are encountered. There is a short chapter on refractions, a helpful introduction to the beginner without delving into Optics. Injuries to the eye are dealt with adequately, but there is no mention of those of topical interest. There have been several minor improvements in this edition, including a chapter on bandaging and the practical application of therapeutic remedies to the eye.

The author intends this book to be a guide to the student and practitioner, and it fulfils its purpose admirably. It will prepare the former for questions on ophthalmology in the final examinations, and it will be of great value to the latter who wishes to diagnose or treat the commoner eye diseases that occur in general practice. C. F. H.

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Hospital Information, etc.

Notice

Urgently required, copies of Wilk's & Bettany's "History of Guy's Hospital" and Guy's Hospital Reports, 1855, Vol. I (3rd Series). Please forward to the Manager, *Gazette* Office, Guy's Hospital, S.E.1.

Marriages

MYBURGH—SNYMAN.—On Saturday, April 4th, 1942, in the Dutch Reformed Church, Klipdam, South Africa, Lionel Myburgh to Cora Snyman.

Births

BARRACLOUGH.—On April 17th, 1942, at Highfield Nursing Home, Bradford, to Winifred (née Moulton), wife of Charles Barraclough—a son.

LIMPENNY.—On March 25th, 1942, at St. Mary's Nursing Home, Nottingham, to Madge (née Baker), wife of Captain F. T. J. Limpenny—a daughter.

MACKENZIE.—On December 3rd, 1941, at Pietersburg, South Africa, to Wendy (née Fox), wife of Captain L. G. Mackenzie, S.A.M.C.—a son.

Deaths

CARLILL.—On April 16th, 1942, very suddenly, at Tavistock, Hildred Bertram Carlill, M.D., F.R.C.P., aged sixty.

ELWORTHY.—On April 9th, 1942, at The Wildernesse, Emily Meade Elworthy, porteress and faithful servant of Guy's Hospital for thirty-eight years.

Eds. { H.F.O. N.A.N.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *16th May* 1942 — *Number* 1404

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THE planning of medicine after the War is arousing much discussion at present. This is a natural and desirable outcome of the comparative security which our country has experienced during the last year, combined with an increased confidence in victory. Under such circumstances, however, it becomes fatally easy to drift from a feeling of active participation in the War into one of detached observation of the present and premature speculation about the future. We can best counteract this tendency by considering periodically what more we can do to improve our War effort. Guy's can claim to have accomplished much in this respect in the past. The introduction of appointments for out-patients was a particularly important measure, and any other suggestions for saving the valuable working time of our out-patients would be worthy of consideration.

The aspect of hospital organisation which should come under review more than anything else is its capacity to deal with an emergency. It is generally admitted that the next few weeks or months will be critical and we shall have to be prepared for problems which the Allied offensive in the West will raise. Our sector is on one of the main supply routes for our invasion forces. Through it transport and supplies will move to the coast; wounded and prisoners will return. There will be large numbers of casualties. It will be recalled that the first day of the Somme offensive produced some 60,000 killed and wounded. The German Fascists, ruthless, bold and desperate, will do everything to disorganise our communications by bombing attacks, the use of gas, and, very likely, by parachute and airborne troops, who will sabotage supplies, massacre civilians and do any other damage they can. In fact, it is reasonable to expect a strain upon our organisation very much greater than that of Dunkirk or the Blitz. Those who are sceptical of this picture should remember that up to now we have underestimated our enemies with monotonous regularity, and it would be foolish to suppose that the Luftwaffe is incapable of the most savage blows when the necessity arises. Moreover, the capacity of the Hospital to deal with casualties has been reduced since the Blitz period by depletion of its staff and reduction in the number of casualty beds owing to a much-needed increase in civilian patients. As we go to press the problem of the numbers of beds which should be reserved for casualties and for civilian patients has not been solved. The recent reduction in the number of beds for the latter was unfortunate in its rapidity, but it is clear that the conflict between the desire to serve the civilian sick and the necessity for maintaining sufficient casualty beds is difficult to resolve.

In preparing for this situation Guy's has one great advantage: the experience gained from dealing with the casualties of Dunkirk and the Blitz. In particular, the numerous practical difficulties which arise when even the best-thought-out plan is put into operation were overcome, so that within a few weeks the Guy's casualty service was operating smoothly and rapidly. That about 1,500 casualties were treated at Guy's during the Blitz period gives some indication of the efficiency obtained. It is essential that with the help of this experience our organisation should operate smoothly from the outset of an emergency, which will break upon us without warning and develop rapidly to a climax.

What further measures can we take in preparation for the coming emergency? Rehearsals are valuable because they stimulate each person to familiarise himself with his duties. In addition, they reveal practical difficulties which were not suspected. For instance, rehearsals before the Blitz had shown that the existing fire-escapes were unsuitable for stretchers. These were altered and a new route across Nuffield roof was made, by which the patients were rescued when the staircase of the Medical Block was hit. It would have been an unpleasant discovery to make in the dark, with the staircase burning, bombs falling and flak bursting overhead. Dr. Bishop tells us that the results of the rehearsal on May 7th were on the whole good, and more are to follow in the near future. The depletion of the Staff renders it imperative that all senior students should be given a definite job to do in an emergency. Final year students who applied for exemption from the Home Guard did so on the assumption that their

services would be needed in the Hospital under such circumstances. Above all, it should be remembered that, however good the organisation, success depends ultimately upon the competence of each individual. Moreover, everyone has the right and duty to make suggestions for improvement.

It is difficult to recapture a sense of urgency without, so to speak, being under fire. At the time of Dunkirk we were spurred on by the possibility of imminent defeat. To-day we are confronted by an equally challenging but more hopeful possibility: victory this year.

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IT does not appear to be known generally that facilities exist for students to carry out laboratory investigations for their own interest. A bench has been set aside for this purpose in the bacteriological laboratory on the first floor of the new Pathological Block. Apparatus will be provided if asked for, and Dr. Knott and Dr. Shuttleworth are always glad to help.

On Pyorrhœa Alveolaris

A Lecture delivered in the Medical School, Guy's Hospital, on Monday, 16th February, 1942, by F. N. Doubleday.

GENTLEMEN,—When you go into practice this is a disease about which patients will consult you. They may desire you to confirm the opinion of their dentist that their teeth should be removed; you may desire to assess the effect which this disease is having upon the general health of the patient.

Nomenclature.—The condition was first fully described by Rigg, of Baltimore, in 1835, as Rigg's disease. He described it as a flow of pus from the alveolar process, pyorrhœa alveolaris. The flow of pus is, however, only a symptom and not a constant one of this disease. It should, therefore, be described according to the nomenclature of Sir Frank Colyer[1] as chronic general periodontitis, because it is essentially a disease of the periodontal membrane and affects many teeth. In recent years Professor Gottlieb, of Vienna, has proposed to call the disease chronic general parodontitis and the dental world has blindly followed this lead, which is bad Greek and still worse pathology. The Greek preposition παρα means "at the side of," the preposition περι "around" a tooth. If a new term is to be introduced at all it should be para-odontitis. It is, however, a great mistake, when the term "periodontal" is well established in the literature to introduce a new term so that one has to speak anatomically of the periodontal membrane and then pathologically of paradontal disease. Men who so confound their Greek prepositions deserve to have their names commencing with vowel sounds with the harshest breathings above them.

Anatomy.—The implantation of a tooth in its bony socket constitutes a joint. The tooth root or roots are pyramidal in form and in many cases are curved; they are first developed and the alveolar process of the jaw is built up around them, to form the tooth socket and its supporting alveolar bone; between the tooth and its socket, part of the mesodermic connective tissue, from which both tooth and bone arise persists as the periodontal membrane. This membrane, around the tooth root, consists of interlacing connective tissue fibres which sling the tooth in its socket and enable it to withstand the force of mastication; it is richly supplied with blood-vessels and less well supplied with lymphatics and with nerves. Where the periodontal membrane and the gum meet, at the neck of the tooth there is a reflection of the mucous membrane constituting a shallow depression, in a normal adult 2–3 m.m. in depth; this constitutes the gingival crevice or trough. This crevice is lined by stratified epithelium from the gum, which unites with epithelium which originally constituted part of the enamel-forming organ. This epithelial lining, like other epithelium of the body is protective and normally prevents infection of the connective tissue of the periodontal membrane which lies beneath.

Ætiology.—The disease is due to a wedging of protein food between the teeth which becomes a focus for the growth of proteolytic organisms. General overcrowding of the teeth, faulty fillings and appliances, lack of oral hygiene, deficient functional use of the teeth, mouth breathing, disorders of diet and lowered general health are predisposing causes.

Pathology.—The first change is seen in the gum or gingival margin of the neck of the tooth. Here infection and inflammation results in swelling of the papilla of gum between the teeth and the gum around their necks. The epithelium becomes sodden and desquamates so that bacteria invade the submucous connective tissue and peptonise it with the resulting formation of a pocket, around the neck of the tooth. In this pocket food stag-

nates and proteolytic bacteria grow, making the pocket deeper and deeper. Drainage from these pockets is poor and so absorption of toxins into the periodontal membrane occurs, resulting in reaction to injury, proliferation of the connective tissue cells, round celled infiltration, formation of giant cells along the margins of the root cementum and of the tooth socket resulting in eventual absorption of both these tissues. A further phenomenon which has been described by Gottlieb[2] is a downgrowth of epithelium from the surface along the cementum covering the root. This has been described as the principal cause of the formation of the pyorrhœa pocket. This must not be accepted until its presence has been demonstrated on 100 per cent. of the cases and until it has been shown that it is not of the same nature as the proliferation of developmental epithelial remnants which are always seen miscroscopically in the periodontal membrane when it is irritated by toxins. The formation of giant cells along both margins of the periodontal membrane results in the decalcification and peptonisation of the alveolar bone forming the tooth socket upon one side and of the root of the tooth upon the other, so that the tooth becomes progressively looser and appears to be extruded from its socket. If the disease goes on long enough the tooth may literally fall out as the result of this process. Then there is also absorption into the general blood stream, through vessels of the periodontal membrane, of toxins, emboli and of actual micro-organisms. These may affect tissues in remote parts of the body causing, e.g., fibrositis, synovitis, inflammation of nerve sheaths, sciatica, etc. As the root of the tooth is stripped of its periodontal membrane a deposit of calculus occurs in a definite narrow ring which constantly follows the line of destruction of the periodontal membrane. This calculus is due to precipitation of lime salts from stagnant saliva and serum in the pyorrhœa pocket Gooderich[3] and Bulleid[4] have shown that calculus may also be formed when a thread organism, leptothrix buccalis, grows in the gum pockets. The formation of osteoclasts results in absorption of the apical part of the root of the tooth, which becomes roughened and progressively shorter. As the tooth pulp is alive reaction to injury leads to a deposition of lime salts in the dentinal tubes where root absorption is taking place. This is a protective mechanism which results in hypercalcification of the root of the tooth. When such a tooth after extraction is boiled and held up to the light, parts of the apical portion of the root will be seen to be translucent due to the hypercalcification. These apices are brittle and very liable to fracture and to be left in the jaw at extraction, they may then constitute a serious cause of residual infection. This is the common cause of the apex of roots found in skiagrams after the teeth are believed to have been extracted.

Bacteriology.—Most cases of chronic general periodontitis are due to mixed infection in which pyogenic strains of streptococci and staphylococci play the principal part.[5] There is a quite distinct type where the infecting organisms are spirochaete dentium and bacillus fusiformis growing in symbiosis.

Clinical Signs and Symptoms.—In the early stages patients complain of hæmorrhage from their gum margins when they clean their teeth or press upon them; this is often associated with bad breath and a foul taste. Later a flow of pus from the gums may be noticed. Patients frequently complain of malaise; they may show definite evidence of a secondary anæmia. The teeth are progressively loosened and tend to protrude.

Treatment.—The initial treatment is dental. Study of the patients' mouth, careful scaling and cleaning, elimination of overcrowding and restoration of function, instruction of the patient in the maintenance of oral hygiene. Where the pockets are shallow they may be excised by a diathermy knife. The pockets may be packed with a caustic to cause the infected surface to slough and leave a scar beneath it. If the infection is fuso-spirillary[6] it soon yields if the pockets are filled with chromic acid 5 per cent. followed by peroxide of hydrogen, 10 vols. This combination liberates free nascent oxygen and these organisms cannot live in an atmosphere rich in oxygen. Then attention must be paid to the general health, especially to diet and to the regular action of the bowels. The full development of nasal function is important. To prohibit smoking and teach the patient to wash their nasal fossæ through with very weak Dettol and then to learn to nose-breath is usually effectual. A dental mouth-screen will greatly assist. Where it is suspected that the patient's general health is affected the doctor should begin by putting the question squarely to himself as to whether it is likely to be so or not. Many a patient with an overloaded bowel or an endocrine disfunction is liable to attribute all their troubles to the teeth. In some cases wholesale removals of the teeth will only pile Pelion on Ossa and add to their troubles. The indications for removal are—(1) a well-established infection; (2) evidence from skiagrams that the infection has resulted in a breaking down of the compact bone lining the socket and has spread into the cancellous bone; (3) that cultures show the presence of pyogenic organisms of sufficient virulence to cause sensitisation reactions with the patient's serum, such, for instance, as the precipitation test; (4) direct smears may show plasma cells and the leucocytes should always be critically

examined to see whether most of them are degenerating, which is a bad sign or active, which is a good one; (5) secondary anæmia and loss of weight may be evidence of infection from this or from some other septic focus in the body; (6) the work of Okill and Elliott[7] must be kept in mind. They showed that when teeth are removed for chronic general periodontitis blood cultures will show a bacteriæmia for some hours afterwards. It has been suggested that this is due to a pumping action of the forceps driving organisms into the blood stream, but they are equally recovered where the tooth has been removed by surgical means without any pumping action. It follows that extractions in these cases must be undertaken with due care; thorough preliminary cleaning of the teeth and mouth, avoidance of all unnecessary trauma during tooth removal, insistence upon the patient resting quietly in bed for forty-eight hours afterwards, and scrupulous care in the use of mouth baths, attention to the bowels and the administration of sulphonamides at the right time should always be considered. The diagrams made by Dr. Crow[8] show that the surface area of a pyorrhœa ulcer may vary from three square inches where only a few teeth are involved to over twenty square inches when all the teeth are affected by the disease. This is a large area from which septic absorption occurs and, in addition, infected material from these surfaces is constantly swallowed into the stomach and inhaled into the lungs. The disease, therefore, merits your serious attention; it is worthy of unbiassed consideration.

"How happy is he born and taught
That serveth not another's will,
Whose armour is his honest thought
And simple truth his utmost skill."

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Out-Patients' Appointments Scheme at Guy's

By Dr. P. M. F. Bishop, Deputy Superintendent of the Hospital, and Sister P. E. Bird, Sister-in-Charge of the Out-patients' Department.

(*Reprinted by kind permission of "The Hospital."*)

THE desirability of a scheme to curtail the period of waiting for patients attending the out-patients' department had been recognised for some time before the War. The fact that many of the patients are now engaged on work of national importance and can ill afford to waste unnecessary hours sitting on an out-patient bench has made the introduction of such a scheme a matter of urgent necessity. The relatively small number of patients attending the department has facilitated its execution.

Arrangements before the Introduction of the Scheme.

Patients were required to arrive at the department at the advertised time of commencement of the session they wished to attend. New patients had to join a queue to see the Out-patients' Enquiry Officer and to register, then join a second queue to receive their out-patients' letter and have it filled in by the nurse, and, finally, join a third queue outside the clinic to which they had been assigned. This led to considerable congestion in the Out-patients' Hall and it was often necessary for a patient to wait three or four hours before receiving medical attention. In some cases different times were allocated to old and new patients, thus curtailing to some extent the waiting period. Though sympathetic consideration was given as far as possible to individual patients who had to travel long distances to reach the Hospital, it was not possible to provide for such contingencies as a general rule. A tea-stall in the Out-patient Hall dispenses tea and buns, but it cannot be said to offer complete satisfaction for the patient who has had an exceptionally early breakfast and is unlikely to be free to return home for anything but a very late lunch.

There was no possibility of controlling the number of out-patients attending any particular session and too frequently it happened that an exasperated patient was ushered into the presence of an exhausted doctor at 1.45 or 6 p.m. to their mutual

dissatisfaction. No means of adjustment of the numbers of patients presenting themselves was possible should a member of the staff be unable to attend through illness or other unavoidable cause. It was impossible to predict whether a session would occupy one hour or four, and it was difficult therefore to arrange one's subsequent engagements.

The Appointments Scheme in Principle.

The chief feature of the scheme is that appointments are made in hourly "blocks," so that one batch of patients attends, for instance, between 9.30 and 10.30 a.m., the next between 10.30 and 11.30 a.m., and so on. No patient, therefore, should wait longer than an hour before seeing the doctor and many will see him within a quarter or half-an-hour of their arrival.

The number of patients booked for each hour varies in different clinics and has been determined by consideration of the previous habits of each clinic. It is found, for instance, that physicians deal with from two to four new cases an hour or eight old cases, whereas surgeons see six new cases an hour.

Except by special request cases are booked in order of application so that there shall be an unbroken sequence of patients.

Appointments are made by the following methods :—

1. *New cases referred by outside doctors.*—The patient (or the doctor) makes the appointment by telephone, letter or personal application to the Sister-in-charge of the out-patient department or the Appointment Clerk. Registration takes place at the time of attendance.

2. *Transfers.*—Patients transferred from one out-patient clinic to another are directed to the Appointment Clerk immediately they leave the transferring clinic. An appointment is made for the appropriate day and hour. Appointments are made for ward cases required to attend the out-patient department by the Ward Sister in consultation with the Out-patient Sister before the patient is discharged from the Ward.

3. *Front Surgery (casualty department) cases.*—Patients attended to in the Front Surgery who need to be referred to an out-patient clinic are directed immediately to the Appointment Clerk to make their appointment and to see the Out-patient Enquiry Officer.

The Scheme in Practice.

Enquiries by letter or 'phone from doctors or patients are received in the Sister's Office. Reference is made to the appointment book, the appointment is entered and the patient told when to attend. The Appointment Clerk is on duty at her desk in the Out-patient Hall during the morning and afternoon making appointments and entering them into the appointment book. At the end of the day she prepares a list of all the appointments made for the next day. With the aid of this list the out-patient porter fetches all the out-patient letters of cases re-attending and places them in the appropriate compartment of a cardboard filing case sub-divided under the headings of the various clinics. The next morning the nurse collects all the out-patient letters for her own clinic from this case and by reference to the letters can find and have ready any X-ray films, bacteriological or chemical reports, etc., which may have become available since the patient's last attendance. All this can be done before the patients arrive and the nurse can have everything in readiness and complete order by the time the clinic commences. This was by no means possible under the old arrangements for the nurse had no means of knowing until they arrived what patients would attend.

At the end of the day the list prepared by the Appointment Clerk on the previous evening is returned to the Sister's Office together with the out-patient letters of those patients who "failed to keep appointments" (these words are entered in the out-patient letter). On the Appointment Clerk's list the nurse has noted when a patient has been unduly late or has been kept waiting a long time.

Each patient is given an attendance card when he first attends a clinic, which is shown to the porter at the entrance to the out-patient department on subsequent visits. The times and dates of appointments are entered on the back of this card as each appointment is made.

New cases are entered in ink with the name of the patient : old cases in pencil with the number of the patient's out-patient letter. When the patient attends, his name or number is ticked off, when he fails to attend, it is crossed off. Patients appearing without having made an appointment are fitted into vacant spaces and entered as "extra."

Failure to Attend.

The number of patients failing to attend is about 15 per cent. Such failures seriously disturb the smooth running of the scheme and may cause inconvenience by making a gap in the sequence of cases waiting to see the doctor. Sometimes other patients have already arrived and can be put in to fill the gap. On occasions, however, nothing can be done about it and the doctor must

wait until the next patient arrives. This is one of the unavoidable disadvantages of the scheme.

Patients attending without an Appointment.

It is to be expected that the number of such cases will diminish as the existence of the scheme becomes known to all the doctors who refer patients to the Hospital. It is often possible to fit the patient in fairly shortly after his arrival, but he may have to wait until the end. In any case the period of waiting will be no longer than it would have been before the appointments scheme was introduced. Every effort has been made to make outside doctors aware of the scheme. Most of the doctors who regularly send cases to the Hospital have been notified, and a broadcast announcement has been made through the courtesy of the B.B.C.

Punctuality.

It is obvious that punctuality on the part of both patient and doctor is essential for the smooth running of the scheme.

Times of Attendance of New and Old Patients.

In some clinics all the new cases are seen first. One can do justice to a long new case better in the early part of a session when one is fresh than at the end of the session when one is becoming tired. Again, the early part of the session can be particularly devoted to teaching and old patients can be seen later in the session by which time the students may have to leave to attend a lecture or a ward round. In the case of an out-patient officer (O.P.O.) who is a house officer and does no teaching it is found more convenient, however, to deal with old cases first, as they can be more accurately timed. In some clinics the physician sees a few old cases first while the students write up the new cases on which the physician subsequently teaches. In the throat department new cases are seen and examined first by students and subsequently taught on by the surgeon. Old cases are, as a rule, attended by the dressers, and each patient makes an appointment personally with his own dresser.

Limitation of the Number of Cases Seen.

In some clinics a limit is put on the number of cases, especially new cases, seen at a session. This would appear to be a wise arrangement as well from the patient's point of view as from the doctor's, and one which can only be made by adopting the appointments scheme.

Difficulties in Allotting the Time for Each Case.

Such difficulties exist to a greater or less degree in every clinic, but in some they are serious. This has been found to be the case in the skin department, where a new case may have an immediately obvious diagnosis and treatment and be dealt with in a couple of minutes. Another may be of considerable interest from the point of view of teaching, or may require a relatively lengthy examination and occupy half an hour of the physician's time. In such circumstances it is difficult to gauge the length of time to allot to cases. To compensate for this it is the practice to book rather more cases to the hour than it is expected the physician can deal with so that there shall be patients waiting should he be unexpectedly rapid over some cases.

The Necessity of "Sorting" the Cases

In some clinics a preliminary sorting of the cases by the surgeon is necessary before the clinic can commence. For instance, in the eye department some cases must go to the refractionist; others to the clinical assistant for some simple and immediate treatment; others to the surgeon for teaching purposes and consequently a certain amount of waiting is unavoidable.

Conclusions.

On the whole the appointments scheme presents more advantages than objections. It certainly succeeds in its main object of curtailing the period of waiting. It relieves congestion in the Out-patient Hall. It allows alterations to be made in the out-patient time-table at very short notice. It makes it possible to restrict the number of cases seen at any one session. It permits the nurse to prepare more efficiently for the management of the session. It gives the patient the desirable impression that he is an individual and not one of a crowd. It represents an attempt to increase the efficiency of the out-patient department. It possesses disadvantages—in some cases it is impracticable. In practice it may be necessary to modify it. In principle it is our opinion that it has come to stay.

CANDIDATES' EFFORTS IN A FINAL EXAMINATION.

"The main aim in flaccid paralysis being to keep up the tone of muscle, which atrophies in most cases very quickly, the nerve supply to the muscle must be attacked, and this requires great patience, care and skill."

Sector News

Guy's Letter

THE first bomb to land on Guy's, about twenty months ago, was a direct hit on Hunt's House, and, in its wake, it brought down the entire stone staircase. After some time a temporary staircase of wood was erected up to the first floor, and then to the second floor, and Addison and Victoria have been in use for many months now. The lifts which were involved in the avalanche were not, however, replaced until about a month ago, so that all cases in the first floor wards had to be carried up and down the stairs, which was no light job of work in the hot weather when there were fifteen heavyweights to be evacuated. Nor did the reminder that our fathers, when they were surgical ward clerks in the old surgical block, had to man-handle their cases up the stairs, make the task any the less tiresome. But now we have a lift at the back of the block those days are, anyhow for the time being, past, and patients and dressers travel to the first and second floor wards in comfort and increased security. Mary is now a female surgical ward, and Bright and Wilks accommodate the female and male medical cases. Addison remains the male surgical ward and, at the end of this week, when the cleaners have had a go at it, the far half of Victoria will be once again the maternity ward, and the near half will be kept empty, in the hope that the horrid little germs which frequent the wards of the sick and "unclean" will be unable to reach the "clean" mothers and the products of their labours. Eyes is now a ward into which casualties are deposited pending emergency operations, or recovery from collapse. The far end of the out-patient hall, which is still curtained off, is still bedded and bedclothed in readiness for air-raid casualties. We sincerely hope that it will grow dusty from disuse..

And now may I stop, please, because I wanted to write about the oncoming and offgoing housemen and a witty little ditty on the pain it causes Bain, but I know I mustn't—because he seems to have backed a winner this time.

H. A. R.

Farnborough Letter

AFTER the barrage of criticism which appears to have resulted in the complete expurgation of Sector letters from the last issue of the *Gazette*, it is with considerable misgivings regarding the waste of time, paper and ink (all of which are in very short supply at Farnborough) that we begin the present composition. Though it is not our intention to embark upon a prolonged apologia for the letters which we and other long-suffering drudges have been in the habit of producing at regular intervals since the outbreak of War enforced the dispersal of the Guy's community, yet we do propose briefly to indulge in the luxury of a grouse. We agree with the correspondent who suggested that the Sector letters should incorporate such information regarding the general life of the Hospital as may prove useful to those about to take up appointments there; but the strict adherence to such a principle would mean either constant repetition or else only a sporadic letter indicating changes, yet, for the sake of make-weight we turn to the non-academic side of the Hospital's activities, not only are we at variance with the national policy of austerity, but we are also committing the crime of "tatlerity." On the other hand, we regret that our writings provide no anodyne for the nostalgia of Service readers; but we are living in places they may not know, with strange customs foreign to Guy's, and, in our heart of hearts, we suffer from much the same complaint as they. The conclusion, then, which we would draw from the recent correspondence is that the Sector letters are likely to appeal, if they have any appeal at all, to only a limited fraction of the readers of the *Gazette*—namely, those who have some specific interest in the base from which the letter comes; in this respect the letters are comparable to accounts of minor sports, dental dinners and the like, and the publication or suppression of all these contributions should be decided on the same basis and they should stand or fall together.

There has been in operation here since May 1st a new scheme for the admission of cases, involving the whole-time employment of a special medical officer in the receiving ward, thus freeing the take-in H.P. and H.S. from the necessity of continually travelling backwards and forwards between their own wards and the receiving rooms. It is hoped that the new arrangement will not only achieve its primary object of economising the time of the diminishing staff, but will also have some beneficial side-effects. Thus, on the surgical side, it should facilitate the regulation of "cold" admissions; while, on the medical side, the more rapid transfer of cases to the main wards should centralise the active treatment and render the cases more readily accessible to the observation of the ward-clerks.

We learn from Nurse Bridgwater that the Farnborough mixed hockey team has recently completed an enjoyable season; it is hoped that the playing-field at Bassett's will be available for next season's games.

The Pupils' Physical Society (Farnborough Section) has now for a second time entertained the nurses at a meeting; on this occasion an address was given by Dr. Head, of the Home Office, on "Industrial Diseases." The nurses were not slow in returning the compliment by organising a lively debate presided over by Professor Payling Wright; the motion, proposed by Sister Grimes, was "That environment is more important than heredity," but after many speeches on both sides, the opposition, led by Dr. Felix Brown, won the division.

Another change of house-officers has occurred. This time, in place of Messrs. Craig, Jones and Crabtree, we have been joined by Messrs. Goodhart, Cross and Hohn; while Mr. MacLaren alone remains of the old stagers.

V. C.

Tunbridge Wells Letter

COMRADES, I am neither a Socialist, a Cummunist, a Fascist or a Conservative. I belong to no party, I serve no clique; but recently it has been continually evident to me of the lack of spirit, typified here by a great many students, to do anything for which they do not get immediate concrete recompense.

That this is so has been shown by a general meeting of the Students' Union, held here a short while ago; a few people, other than those actually residing in Sherwood Park (where the meeting was called) constrained themselves to congregate—the majority of the rest, I suppose, all had engagements which could not, under any circumstances, be broken—the pictures. Those who did come along may have been bored stiff, but at least they showed enough interest in affairs which, after all, directly concerned them, and those negativists who may or may not have been present must realise that nothing of importance is ever gained easily.

It came to our astounded ears that about six people arrived at a meeting to elect a dental representative for the Students' Union; the notice of the gathering was not a last-minute announcement—the same old story of lacking interest and inertia.

Then, to add to the chaos of the meeting, we found people in blissful ignorance of what occurred at the last meeting, debating points which were settled at that meeting.

To turn to a slightly brighter and definitely less sarcastic tone, we may dwell for a moment on the activities of the dramatic and choral societies. The former has held a number of very successful gatherings at Pembury Hospital, ably assisted by that hospital's own society, and the joint society is, I understand, in the throes of producing one or two short plays, to take place this term. The Choral Society, under the admirable "baton" of Mr. Baxter, has sprouted an orchestra, soloists and a semi-chorus; it is rather unfortunate that, owing to the lack of a complete chorus of Guy's men, the society has had to draw on outsiders to assist; this, to my mind, is deplorable, but it is too late to deplore as the opera, "Merrie England," which is being performed, is due to be presented on May 23rd.

On reading correspondence to the Editor, which has recently appeared in the *Gazette*, I am bound to agree in some measure with the writers in their statement that Sector letters are, for the most part, unmitigated tripe; but I fail to comprehend what, in fact, they mean by their suggestions as to the contents of the letters. The "general life" here consists of routine lectures and practical classes, which vary only in their subject-matter, of meetings held by various societies about which we do now, and have in the past, enlightened our readers, and of the peculiar activities of certain individuals whom most of the readers have never heard of and probably never wish to hear of again.

The problem of the author of any portion of Sector News is to please and interest all the people all the time, a task which, if not Herculean, is impossible.

J. G. P. H.

Correspondence

DEBATING SOCIETY.

To the Editor of the GAZETTE

SIR,—I note your mention in "Passim" of the Debating Society.

At present I hold the minute-book of the Society containing the record of debates which goes back to before the last war. This, I should be very pleased to send, together with a considerable quantity of headed paper, to whomsoever may be elected secretary, if the latter will communicate with me.

If the Society should be resuscitated, may I, as an old secretary, wish it every success?

I am, Sir,

BRIAN D. JOHNSON,
Flying Officer,
R.A.F. Medical Service.

Central Sick Quarters,
Royal Air Force,
Mount Tryon, Torquay.

CULTIVATION OF BELLADONNA.

To the Editor of the GAZETTE.

SIR,—Your note in "Passim" on the cultivation of belladonna at Guy's may inspire others to follow our example, in which case the following details may be of interest.

The process of vernalisation artificially reproduces the natural conditions likely to be experienced by uncollected seed lying dormant throughout the winter. It has been proved that it greatly increases the germination rate. It is carried out by soaking the seeds in water for twenty-four hours and then refrigerating them for four days at 0 deg. C.

After the above treatment our seeds were sown in boxes which were kept at an even cool temperature in the glass-enclosed portion of the balcony of Baby Ward. A large proportion of the seeds have germinated and the seedlings, after about three weeks, are about two inches high. It is hoped to plant them out in the open at the end of May. The drying of the collected leaves will be done in the drying cupboard used for tablet granules, the average temperature of which is about 80 deg. C.

For those starting now it would probably be advisable to sow in gentle heat in a greenhouse, if this is available, in order to get seedlings sufficiently large to plant out at the correct time. The domestic airing cupboard or even an electric cooker might be pressed into service for drying the crop if no other means are available.

The pharmaceutical staff here have enthusiastically co-operated in the venture and, while none can prophesy what alkaloidal yield will be obtained, it was, nevertheless, thought worth while making the attempt as a small contribution to the war effort.

Yours, etc.,

J. MOORE,
Chief Pharmacist.

Pharmaceutical Dept.,
Guy's Hospital, S.E.1.

QUALIFYING EXAMINATIONS.

To the Editor of the GAZETTE.

SIR,—Your comments in "Passim" as to the multiplicity of qualifying examinations is very much to the point and revives a correspondence which took place in the *British Medical Journal* a few years ago as to the need for a "one-portal" entrance to the medical profession. I am not qualified to speak as to the number of people who fail to take their Final Examination at Cambridge, but I know something of the failures at the Final M.B. and B.S. (London). After the last war a number of "elderly gentlemen," aged about twenty-seven (of whom I was one) were induced to take the M.B., B.S. course. To consider my own case. I had taken nothing but literary subjects at school, and had carefully eschewed all forms of science such as chemistry, physics and biology; my knowledge of these subjects therefore, was just nil. Yet, by dint of the severest exertions, I was successful in passing the first and second M.B., B.S. examinations in about the minimum time, only to come a cropper more than once at the Final. I do not wish for a moment to pose as a neglected genius, but I still think that I was entitled to become a London graduate, and would have become so were it not for some absurdly high standard laid down for the Final, and not even hinted at by the Dean at the time of registration.

At the age of thirty-three the average man begins to feel that there are other things in the world besides burning the midnight oil and becoming prematurely grey, merely to fill the coffers of the medical schools and the London University.

In the brave new world which we are promised after this War it is to be hoped that those boys who are now, both literally and metaphorically, "riding the whirlwind" in defence of our liberties will not become the victims of the combined "avarice" of medical schools and London University as were those of 1914–18.

I am, etc.,

SENEX.

The Machine Age in Medical Science

From Sir HARLEY WIMPOLE, M.A. (Andaman), D.Sc. (Perim), LL.D. (Spitzbergen), M.D. (Tristan d'Acunha), D.C.L. (Erewhon), etc., etc.

I HAVE read the article by Dr. Fred. Schwite, in the *Gazette* of May 2nd, with great interest, especially as I am one of the few people who have had considerable experience of the apparatus described by him. I acquired one of the original models in 1872, since when it has been greatly improved, but even the 1941 Model, which is the latest in my possession, requires considerable care, both in adjustment and operation. It is certainly not an apparatus which I should recommend to the general practitioner for many reasons. The question of accommodation alone is one of some difficulty. In my own case I was fortunately able to acquire a disused hangar from the Air Ministry, but even that is on the small side.

As regards adjustment, this must be most carefully carried out. In my first case, the sound-track was not properly synchronised with the rest of the apparatus. The patient was a well-known City man of short and corpulent stature. He was played in position and the apparatus was started. Possibly because the sound track was out of adjustment, the machine diagnosed obstructed labour and immediately proceeded to carry out a Cæsarian section. Unfortunately, the starting switch jammed and the machine could not be stopped until it had opened a somewhat distended bladder. Fortunately, however, it delivered a large uric acid calculus weighing 500 grammes, so the final result was not as unfortunate as it might have been.

The helical-enclosed polyarticulated arms are very liable to get out of adjustment and, when this occurs, untoward results are likely to follow. A few months ago, even with the new model, the machine attempted to carry out a vaginal examination on a famous retired general, registered a diagnosis of atresia and proceeded to operate forthwith. Fortunately, the patient's blood urea was a high one, so that he was benefited rather than otherwise by the bladder drainage which followed.

Were it not for the necessity of keeping my communication as brief as possible because of the paper shortage, I might mention many of the other peculiarities of the machine for the information of your readers, but the two cases I have quoted above will give some idea of the vagaries of which it is capable.

Hospital Information, etc.

Notice

ASTLEY COOPER STUDENTSHIP.

GUY'S HOSPITAL.

This Studentship, tenable at Guy's Hospital Medical School, will become vacant on October 1st, 1942.

The student, who is called the "Astley Cooper Assistant to the Curator of the Gordon Museum," will be elected for a period of three years.

Particulars regarding the Studentship can be obtained from the Secretary to the Astley Cooper Trustees, Medical School Office, Guy's Hospital, S.E.1, to whom applications for the post should be addressed on or before June 30th, 1942.

Pass List

CONJOINT BOARD.

PRE-MEDICAL EXAMINATION.

March, 1942.

Chemistry.

I. A. Blackmore
A. A. W. Fooks.
W. O. King.
R. T. Lowein.
A. Shotts.

Physics.

I. A. Blackmore.
J. B. Causton.
L. J. Evered.
A. A. W. Fooks.
G. A. Kerr.

Biology.

L. J. Evered.
J. L. Hayward.
W. O. King.
L. J. Max.
A. Shotts.

FINAL EXAMINATION.

April, 1942.

Pathology.

W. E. S. Bain
G. G. B. Blackman
J. D. Buxton
*C. M. Dave
*R. A. H. Dubery
R. N. M. Eminson
O. M. Jonathan
T. L. T. Lewis
G. R. W. N. Luntz
I. M. MacArthur
R. I. McCallum
*H. G. Phillips
T. L. Reeves
L. Sagorin
G. F. Swann
*G. W. Taylor
R. J. Walker
C. J. Zerny

Medicine.

*A. E. M. Ash-Wiggins
*J. F. R. Bentley
*H. A. Buck
*H. V. Cockburn
E. G. Cook
*C. M. Dave
*G. W. Downes
*M. F. Gallop
*E. J. Grierson
*E. O. Hohn
*P. W. Hopper
*J. A. Irwin
*E. O. W. Jones
W. J. Lewis
*M. J. May
*J. M. Munden
H. F. Osmond
*J. W. Stephens
*G. W. Taylor
*G. E. Thomas
*C. H. Watts
M. Wilks
*E. Williams
*T. R. Wooldridge

Surgery.

C. A. Anderson
V. Y. Bockner
*H. W. Bunn
P. H. Cardew
*P. W. Edward
J. D. Everall
R. J. Forster
*R. Franey
J. D. Grene
*F. K. Grittenden
W. J. B. Hett
R. H. Hughes
T. L. T. Lewis
V. J. McLean
H. C. Mukerji
*J. M. Munden
*J. B. Musgrove
*H. G. Phillips
L. A. Rook
M. N. Teubes
I. R. Waters
*C. H. Watts
D. A. White

Midwifery.

T. M. Ball
P. L. Blaxter
J. T. Doyle
G. M. Evans
R. J. Forster
D. Gill
W. J. B. Hett
W. H. Humphreys
R. B. Illing
W. James
T. L. T. Lewis
H. R. Lomax
I. S. MacLeod
D. R. I. Mason
*M. J. May
S. Mandel
D. McGregor
F. S. Mellows
M. B. F. Ordish
R. T. Parking
R. Pilsworth
N. A. Punt
J. Ronchetti
J. P. I. Rose
G. R. M. Sichel
H. C. Still
D. J. Tibbs
W. H. Trethowan.

* Have now completed the examination.

UNIVERSITY OF LONDON.
SECOND EXAMINATION FOR MEDICAL DEGREES.
March, 1942.

K. W. Allanby
W. F. Belsham
N. J. Bloch
M. J. Blunt
P. Buri
K. A. A. Campbell
A. S. R. Cini
C. B. Clarke
A. St. J. Dixon
N. R. Fenton
J. S. E. Gilbart
L. W. Godfrey
B. D. Grant
R. C. Jennings
R. G. G. Jones
T. J. Jones
H. A. Lane
P. C. Leeson
D. O. Lloyd
I. Macdonald
N. K. Macrae-Gibson
E. G. Murphy
D. P. Nicholson
D. T. H. Paine
H. W. Palmer
G. F. Penny
B. H. Pickard
C. G. Roberts
D. Q. Trounce
J. D. Wallace
N. C. T. Watford
E. A. Wright
D. M. Zausmer

Papers by Guy's Men

Matthews, E. The use of the manometer in Obturator technique. *Brit. Dent. J.*, 1942, **72**, 188.

Leader, S. A. A dental revolution. *Ibid.*, 153.

Siggers, N. A. A method of local anæsthesia for conservative dental surgery. *Ibid.*, 164.

Contents Guy's Hospital Reports, 1942, Vol. 91.

Hurst, Sir Arthur. The pathogenesis of the sprue syndrome. P. 1.

——— Severe cases of the Sprue syndrome. P. 22.

——— Wright, G. Payling and Ryle, J.A. Sprue syndrome from obstruction of the lacteals by chronic tuberculosis of the mesenteric lymph nodes. P. 25.

Wass, S. H., and Davies, E. R. Excision of the Patella for fracture. P. 35.

Hurst, Sir Arthur, and Robb-Smith, A. H. T. Fatal Tape-worm enteritis. P. 58.

——— Ogilvie, W. H., and Simpson, C. Keith. Traumatic duodenal ulcer; repeated hæmatemesis from post-operative hæmorrhagic gastritis. P. 61.

Repatriated Prisoner of War

Colonel H. C. Godding.

Reported Missing

We regret to record that information has been received that Captain C. S. Pitt, R.A.M.C., has been posted as missing. Captain Pitt was serving in Malaya.

Births

BRADBEER.—On April 28th, at Torquay, to Ruth (née Morris), wife of W. H. Bradbeer, M.S. (Lond.)—a son.

LYON.—On April 30th, 1942, at Cedar Court Nursing Home, Sutton, Surrey, to Eileen (née Samuel), wife of Captain D. J. Lyon—a son and daughter.

PEARCE.—At Rubislaw Nursing Home, Aberdeen, on April 24th, 1942, to Margaret Jean (née Henderson), wife of Captain R. H. F. Pearce, A.D. Corps—a son.

Marriages

COX—PADBURY.—On April 30th, 1942, at Orpington, A. G. Charlton Cox, Lt. R.A.M.C., son of the late W. Charlton Cox and Mrs. Cox, of Aberdare, to Elizabeth, daughter of Dr. and Mrs. G. T. Padbury, The Laurels, Axminster.

Deaths

BECKWITH.—On May 4th, 1942, at Harpenden, Annie Elizabeth, of Westcliff-on-Sea, wife of the late Clerk to the Superintendent of Guy's.

CLARKSON.—On May 6th, 1942, suddenly, E. J. Allen Clarkson, L.D.S., R.C.S. (Eng.), aged twenty-six, the only son of Lena and Ernest Clarkson.

DOUSE.—On May 9th, 1942, at Cray Valley Hospital, Dr. J. Freeman Douse.

GIBSON.—On active service during April, Colin Charles Gordon Gibson, Lt.-Col. R.A.M.C.

KING BROWN.—On April 28th, 1942, Richard King Brown, M.D., late Medical Officer of Health for Bermondsey, at his home, 2, Nutley Crescent, Goring-by-Sea, Sussex.

SPURRELL.—On May 9th, 1942, at Banningham, Aylsham, Norfolk, after a short illness, William Dewing Spurrell, M.R.C.S., L.R.C.P., in his seventy-seventh year.

Correction

Reviews, *Gazette*, March 21st, 1942.—*The Collected Papers of Wilfred Trotter, F.R.S.*

For " I shall never forget his first paper on malignant disease of the upper respiratory tract at the Medical Society in 1909 with Mr. Charters Symonds in the chair," read " . . . . at the Medical Society, 1911, and Dr. Mitchell Bruce was in the chair."

EDS. { H.F.O. P.L.M.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *30th May* 1942 — *Number* 1405

PASSIM

MANY of our readers must have heard the B.B.C.'s report of the great conference on Health and Production held in London on May 16th. It was notable because shop stewards, trade unionists, managers, doctors and health workers of every sort met together for the first time to discuss ways of combating sickness and accidents in industry and so increasing production. Two speeches by doctors raised much favourable comment; both were from Guy's men, Professor Ryle and Dr. T. O. Garland. Dr. Garland showed that illness alone cost us more than thirty million working weeks a year; in that time nine thousand aircraft could have been built. The military critics say that one thousand fighter planes would have been sufficient to hold the Japanese in the Far East. There were many suggestions how the job should be tackled to make people more aware of the dangers of ill-health, keener to prevent accident and injury by carrying out the provisions of the Factory Acts, and seeing that their employers obey and enforce the Acts.

Guy's is in the middle of a great industrial area and does very important work by maintaining the South Londoners in a fit state to turn out the arms for victory. When we treat men and women from the factories we are in a similar position to a military base hospital; our aim is to send casualties back again into the battle of production, well and strong, as soon as possible. It is proper to remember that a skilled mechanic kept waiting in surgery or out-patients' means that one of our men goes without weapons or ammunition to beat the enemy. Guy's has done a lot: the new out-patients' scheme, opening the light department over the week-end, the special supervision of hand and industrial accidents in front surgery are all things to be proud of—but more can be done. The factory workers usually come off in the evening and in many places the night shift goes on at this time; an out-patients', back surgery and dental clinic for the evenings would save many working hours. It has been tried in some hospitals.

Anyone who has worked in Front Surgery must have seen the number of young girls who come up with hand injuries from certain factories; no doubt their employers are aware of this pain and waste. In peace-time it would have been impolite to draw attention to the matter. We are not at peace. Every maimed hand means days of work lost, for not only does the injured person lose time, but there is a greater loss by those who give help, discuss the accident, enquire into it and later attend at compensation cases. It should be possible to tell employers that this shop or that machine is having a number of accidents, and suggest that either the safety arrangements are faulty or the workers are being negligent. There are probably more apposite suggestions than these which could be put by those who have greater experience, but everyone should try to see where effort can be saved in the hospital, and the authorities would certainly encourage suggestions to make the Hospital more efficient.

WHEN the 1914 mentality was overcome in the middle of 1940 the success of the realist outlook was short; the 1914 was soon succeeded by the 1943 mind. This began as a wise estimation of our chances of taking the offensive made by Mr. Churchill shortly after Dunkirk; it has become a sheltered cranny for the escapists. To these, all decisions can be deferred to 1943, all hopes of victory centre upon that wonderful year, all thought of action removed from the present becomes fantastic triumphs in 1943. We live, however, in 1942 and, unless we act now, we may find that the successes of 1943 are mirages fading into dust and defeat.

When Victoria and Bright were evacuated on the night of September 16th, 1940, some patients were carried into Nuffield House over the roof and taken in through a window; others were slid down a special wooden chute designed to save arduous carrying and taken into Out-patients' Hall by the back route. These two routes were carefully reconnoitred beforehand and such obstacles as the bars in the Nuffield window removed. It is hardly credible that a short time ago it was discovered that those bars had been replaced and the chute had been taken away because of timber shortage. This action shows that the 1943 mind is a dangerous attitude that leads to dangerous actions.

It is true that we have been warned too often

about gas and that such redundant warnings become stale, but when the Premier gives special attention to this matter in a broadcast it is not unreasonable for the authorities to ask that everyone resident in the Hospital should have respirators tested to see whether they are still serviceable. In response to this request less than half the nursing staff turned up for the inspection and very few residents; all the students living in had their respirators tested. Independent folk may resent this solicitude for their safety. Let them be reassured; no one denies their right to commit suicide by exposing their unprotected lungs to vesicant gases, but, for convenience, this right should not be exercised on the Hospital premises.

There was natural reluctance to part with the clinical reports prior to 1900. Some hospitals have not done anything about this matter; others have decided to reconsider it in 1943; until then unnecessary shipping space will be used while the committees ruminate. The shipping position will improve by 1943; the time for giving up waste paper is now—not at some later date. The war does not wait while these committee-men nod out the year.

Each successful candidate in the London M.B. examinations receives with the list of those who have passed the *London University Gazette*, Advertisements. This consists of four pages of foolscap size paper, mostly filled with descriptions of the London Medical Schools. Some of the information is out of date; for instance, Guy's has this: "The College affords accommodation for about thirty-five students, whilst the Students' Club contains dining and smoking rooms." The people who get this are nearly all at one or other of the London Medical schools, so unless the schools are trying to lure students away from their rivals—a reprehensible procedure—this brochure is useless.

▭

THE question of beds is still under discussion. At present there are 115 civilian sick beds available for teaching purposes; for adequate teaching at least another 40 beds are needed. The adjustment to 115 caused some temporary confusion, and during a period of sixteen days seventeen ambulance cases were refused admission to the Hospital. Eight were booked labour cases which could not be admitted because Victoria was closed following an epidemic of pemphigus, and the alternative accommodation in Nuffield House provided only 15 instead of 24 beds. Of the remaining nine cases two might ordinarily have been admitted, but suffered no harm from being transferred to another hospital. The rest were chronic sick who would have been sent elsewhere anyhow.

With a total of 115 civilian sick beds we understand that the proportion available for midwifery is to be 15. This means that the Hospital will then be turning away half its booked confinement cases. The district will start again with Midwives on June 1st, and it is hoped that externs will return later; but in spite of this Guy's will still be turning away patients. It is a grave matter that we should not be able to do our part at this time when mothers and their babies require special care, both for the future of the country and so that men away in the forces and factories need not worry about their wives being confined in strange hospitals. Guy's has never been in this predicament before, and it must be remedied before the great tradition is broken, the fine record of low maternal and infantile mortality forgotten—and the mothers go to other hospitals to have their babies.

An authoritative statement upon the general question of beds in Guy's and the Sector will be found in our correspondence columns.

▭

IN the *Gazette*, No. 1181, October, 1933, a debate upon Fascism in Europe was reported. During the debate a certain Mr. Joyce said: "Democracy is a perverse practical joke which has done too much mischief already and, as such, it must be destroyed." He went on to advise Mr. Layton, who was present and protested against this, to read Nietzsche. In summing up he remarked that the scar upon his face came, not from Heidelburg, but from South Lambeth.

The meeting voted against Fascism by the substantial margin of 150 to 8. We do not know whether Mr. Layton took the advice and read Nietzsche; if he did it certainly did not have the intended effect upon him. There can be few Guy's men who do not admire the South Londoners—the people of the Borough, Bermondsey, Rotherhithe and Lambeth. Those who were in London for the winter of 1940 had occasion to see and respect their courage and determination when most cruelly tested. Mr. Joyce can always be heard by anyone who can endure his tedious efforts at wit. Day and night he whines and snarls, blusters and cajoles; he is, of course, Haw-Haw, the infamous traitor and inapposite propagandist who squirts his poison from Bremen. In spite of him and his brown-shirted supermen the South Londoners are still around us. It is good to record that the people of Lambeth were quick to gauge this lackey of tyranny and deal with him; if they erred it was that they were too moderate, but those were the days when democracy meant talking, not acting. Let us salute them for sustaining the assaults of the enemy upon their homes and attacking and denouncing his agent—the Fascist Joyce.

Endocrine Therapy

A Series of Three Lectures given by Dr. P. M. F. Bishop, Clinical Endocrinologist to the Hospital

I.—PRINCIPLES OF ENDOCRINE THERAPY

THE central nervous system controls the immediate reactions of the organism to its environment. These reactions are transient —the blink of an eyelid, the flick of a cow's tail, the kick of a mule. The nervous impulse is instantaneous and there is a rapid return to the *status quo*. There is need, therefore, for another system to control the more lasting reactions of the body to its environment, to order the growth of the young animal, its sexual differentiation, its metabolism, and to enable the development of the constitution, even the personality, of the individual. These are the functions of the endocrine system. It is the hormones circulating constantly in the blood stream which ensure that a person shall become male or female, fat or thin, tall or short, hairy, smooth-skinned, excitable or calm.

The Nature of Hormone Action.—Very little is known of how hormones act. Many of them are simple chemical substances compared with the complex proteins and lipoids of which the cytoplasm, the cell contents and the cellular membranes are composed. It might be reasonable to suppose that they activate these structures by combining or forming adsorption compounds with them. One might presume that such reactions are rather specific and, indeed, it is the case that only certain tissues are responsive to certain hormones. For instance, there is an area of skin surrounding the anus and vulva of the female monkey which undergoes gross œdema under the influence of oestrogen. This tissue, however, shows no differentiation from that of the neighbouring skin, and yet the line of demarcation of the œdematous area is remarkably clearly defined. Why is it that the more peripheral skin will not respond to oestrogen? Again, one might suppose that a group of chemical substances which produces such a complex and yet unvarying series of effects as the oestrogens should be very closely related in their chemical structure and so, in fact, are the naturally occurring oestrogens. The synthetic compound, stilboestrol, however, which exactly imitates the natural oestrogens in all its functions, shows little resemblance, structurally, to these compounds. There seem to be important exceptions to the degree of specificity of cellular or chemical structure which one would expect.

The Need for Continual Treatment.—Whatever may be the exact nature of the activation of responsive cells by hormones it is clear that the hormone is rendered incapable of further action once it has activated the cell. This principle has many important repercussions. It means that in order to maintain a fairly constant blood hormone concentration, and there is evidence that such is the case, the secreting gland—the hormone factory—must be continuously at work, and that any variation in the production rate is likely to lead to well-marked endocrine changes. It is true that even in health the production rate may be influenced by external factors. For instance, it is most probably accelerated in the case of the thyroid cell during cold weather and slowed down in hot weather. Adrenalin is another case in point. There is normally a steady flow of adrenalin into the blood-stream but, under conditions of emotion or of fright, the blood may be suddenly flooded with adrenalin. The efficiency of the factory is of paramount importance, and it is well that precautions should be taken to ensure a steady flow of hormones. The secreting cell is to some extent protected from over-work and fatigue. For instance, in the case of the secreting cells of the anterior pituitary lobe, the eosinophil and basophil granules are shed and the cells revert to the inactive or chromophobe form before fresh granules are elaborated. The thyroid protects its cells from the harmful effects of overtime work by keeping considerable quantities of the active material in storage for an emergency.

The conception of a gland working in such a way as to supply the blood at a constant rate so that a steady level of concentration may be maintained shows clearly that any imitation of this natural process by hormone therapy requires as far as possible a constant but certainly a continual administration of the hormone extract. Insulin does not cure the diabetic nor adrenalin the asthmatic. It temporarily relieves him. It is true that in certain conditions hormone administration helps to tide over a difficult period during which the organism is adjusting itself to a different level of hormone activity, as is the case of oestrogen administration for relief of menopausal symptoms. It is also true that with the aid of endocrine therapy certain irreversible effects may be produced or accelerated, such as skeletal growth in suitable cases of pituitary infantilism and descent into the scrotum of imperfectly migrated testes. In such cases once the object has been achieved no further treatment is necessary, but in many other types of case the underlying cause of the glandular deficiency remains and hormone administration is merely supplementary or replacement therapy.

Tissue Saturation and Tissue Response.—The activity of the secreting gland is not the only consideration in endocrine therapy. Another and equally important one is the responsiveness of the tissues. Over-stimulation of the appropriate tissues is seen in Graves's disease, in the supermobilisation of calcium in Von Recklinghausen's disease, in the hypoglycæmic convulsions of islet tissue tumours, in the precocious sexual development of granulosa cell tumours, in the virilism of adrenal cortex tumours. All these are due to grossly excessive activity of the hormone factory and the sensitive tissues are quite unable to resist the constant barrage of the greatly raised concentration of hormone. In more normal circumstances, however, precautions are taken to prevent the over-stimulation of sensitive tissues. On the one hand steps are taken to prevent the accumulation in the blood of highly active hormones. For instance, the active principle of the ovarian follicle, oestradiol, is two and a half times as active as oestrone or oestriol, into which forms it is degraded as it circulates in the blood. Again, pregnanediol, the urinary excretion product of progesterone, is completely lacking in functional activity. This conversion of active principles into degradation compounds renders the assessment of endocrine activity of the organism by biological analysis of urinary excretion products extremely difficult and inaccurate. Furthermore, once a tissue is saturated with its activating hormone it becomes relatively insensitive to supplementary supplies and these are rejected and excreted.

Thus it is that so often the effect of hormones indiscriminately and injudiciously administered without sufficient evidence of the appropriate endocrine deficiency is disappointing. In many cases, fortunately, it is also harmless. For instance, it is difficult to disturb the rhythm of normal menstrual cycles by giving oestrogens whereas oestrogenic therapy in menopausal cases often gives rise to uterine hæmorrhage. This is not to say that all injudicious hormone therapy is harmless. Persistent overdosage with oestrogen may induce endometrial hyperplasia with menorrhagia.

The phase in which tissue is most responsive is when it has only recently been subjected to inadequate hormone stimulation. The early and mild symptoms of the menopause, the hot flushes, the headaches, the depression, the lack of concentration, for instance, respond miraculously to quite small doses of oestrogen. Then there is another phase of irresponsiveness, when the tissue has been so long and so completely deprived of its endocrine supplies that structural atrophy has taken place. It will now no longer respond to the hormone, or only with difficulty and to relatively large dosage. For instance, the late effects of the menopause, kraurosis and so-called atrophic or senile vaginitis require high doses of oestrogen. An interesting example of this principle of tissue responsiveness is the reaction of the mouse's ovary to chorionic gonadotrophins. Up to the third week of life the ovary is resistant to the gonadotrophic principle and the mouse is unreliable as a test object in the Aschheim-Zondek test. Similarly, the undescended testis in the young child fails to respond to chorionic gonadotrophin and the optimal age for treatment is from nine years old onwards. A slightly different aspect of this principle is shown by the difficulty in treating successfully a case of male sexual under-development in a man of twenty-three or twenty-four as compared with a boy of sixteen to eighteen.

This variation in tissue responsiveness makes all attempts to standardise dosage absurd. Each case must be treated on its own merits, and the individual dosage worked out by a method of trial and error.

Trophic Hormones.—Five and possibly eight endocrine glands are continually and all at the same time secreting into the blood-stream at least eight and most probably ten or more hormones. It is true that most of them have their own specific functions, but some of them at least are complimentary in their effects and others are antagonistic. For instance, progesterone can act only on oestrogen-sensitised tissues and oestrogens and the adrenal cortical hormone are antagonistic. Co-ordination and integration of these hormone activities seem to be essential. For this purpose the anterior lobe of the pituitary elaborates a number of trophic hormones which control the production rates of the various endocrine factories. Thus the gonadotrophic hormones supervise the reproductive functions of the ovary and testis, the thyrotrophic hormone determines the rate of secretion of the thyroid. Over-activity of this hormone or excessive response of the thyroid is probably the cause of Graves's disease.

The activity of these pituitary hormones, however, is limited by two factors. The one is the development in the serum of anti-hormones. This must be taken into account when hormones of this type are administered therapeutically. The other factor is the property which is possessed at any rate by the oestrogens and androgens of inhibiting pituitary secretion. Other anterior pituitary hormones stimulate skeletal and visceral growth, induce milk production in the puerperal mammary gland and help to regulate protein, carbohydrate and fat metabolism. All these hormones present great difficulties when employed as therapeutic

agents. Owing to their complexity it is almost impossible to separate them completely from one another and they must be extracted either from pituitary tissue itself or from the blood serum or from urine. It is obvious, therefore, that effectively high concentrations are difficult to obtain. Furthermore, it is probable that their only chance of producing a response is when the cells stimulated are in exactly the correct phase. For instance, the chorionic gonadotrophin—the anterior pituitary-like hormone secreted in such great quantities by the developing placenta of early pregnancy—is concerned with the luteal phase of the ovarian cycle. The gonadotrophin found in high concentration in the serum of pregnant mares, however, is capable of inducing ovulation in certain experimental animals and is especially effective in the early phase of the ovarian cycle. Whether it can cause ovulation in the anovular human female is still a matter of doubt. It has been suggested that it certainly has no chance of doing so unless given by intravenous injection.

Chemical Structure and Therapeutic Efficacy.—Hormones vary in their chemical complexity from those, such as the anterior pituitary hormones with five-figure molecular weights and a tendency to disintegrate or inactivate with even the gentlest of chemical treatment, to such simple substances as adrenalin which is a derivative of the second simplest amino-acid, tyrosin. The former present a real conundrum to the chemist. They are difficult to separate, difficult to extract, difficult to concentrate. They are probably inactivated by the digestive juices, but certainly fail to enter the blood-stream *via* the alimentary tract in active form. It is therefore useless to give them by mouth. Because of their colloidal nature and their complex interfaces, they probably form all sorts of adsorption compounds at every stage of their therapeutic administration, and it is a wonder that they have proved even as effective as the few reliable and isolated reports of their successful use have shown them to be. With the hormones of simpler chemical structure it is a different matter. Though the actual constitution of the true active principle of thyroid is still unknown—it is a tripeptide containing thyroxin—a dried extract of the gland contains a highly active substance which is fully effective by mouth. Insulin and adrenalin, though neither of them is active by the oral route (the one because it is destroyed during the digestive processes, the other because its effect is so very transient and evanescent) form satisfactory compounds for injection. The oestrogens, progesterone, the androgens and desoxycorticosterone no longer hold any secrets from the chemist, though I understand the latter is exceedingly difficult to prepare. They can now be employed in a form of complete crystalline purity, and it is certainly not the chemist's fault if they do not succeed.

Such, then, are the substances at our disposal. I have tried to draw attention to the limitations of their use. They are often employed in a blunderbuss manner, and because they seldom do much harm they have not, perhaps, received the respect and consideration they deserve. Because it is so difficult to assess in a scientific manner the clinical effects they produce exaggerated claims have often been made for endocrine therapy. It is my object in this series of lectures to try to indicate to you how hormones may be administered to the best advantage.

"Letter from the Middle East"

To the Editor of the GAZETTE.

SIR,—I can no longer stand being without the *Gazette* and enclose a cheque to secure a supply.

I have never regretted for a moment that I started off by coming to this country. Is there another country where after travelling by car for many days into the interior one may find an old man tending his flock of sheep in the wilderness, re-enacting in every detail a Biblical scene, and then find that he speaks English blasphemy and has more than a nodding acquaintance with Broadway and Fifth Avenue. Not only have I learned that I can stick living in most places, which is reassuring, but I have found that I am in a country with an almost unexplored wealth of interest. There is wild scenery, there are weird places: a galaxy of wonderful birds, strange tortured plants which have raised themselves from the earth at the cost of immense effort, spiders which squeak and are so big that they scuffle; there are places where the hot wind scorches like the breath from a blast furnace, others where ice forms at night: a land of violent contrasts.

Let the word desert never be mentioned in the same breath as Somaliland, but let "wilderness" take its place. There is nothing wild about a sandy desert however sun-blasted it may be. Many parts of Somaliland are flat enough and bare enough to be called desert, but one merely travels through these. The rest is wild, with the wildness of desolate sun-scorched mountains; or of great escarpments; or of juniper forests and precipice; or vast reaches of twisted thicket with frankincense and myrrh, and myriads of giants sentinel ant-hills.

Some naughty aspect of my subconscious tempts me to paint a black picture of Somaliland, to try a pen-picture of the withering heat of the *kharif* in Berbera, of the pleasures of lying permanently on one's back on sandy sheet and prickly heat when the thermometer by the bedside is a long column of mercury which will not shake down unless it is dipped in the thermos flask, and the mercury rises slowly as you read the temperature; of raids when one's nerves are frayed by the heat and constant winds, in a town where when bombs fell

they usually did so fairly close to everybody in the place. And I know what makes me want to do this : it is to justify my existence here, for I feel that we really see no war here such as you people are seeing at home month after month, with little of the amusing to relieve you. Here one sees some of the lighter side of war which tempers all the harder parts. To find an old hag boiling Italian hand-grenades under the impression that they contain bully will compensate for the narrow squeak when a grenade was thrown at one.

At the time of the evacuation, I probably did not feel that my existence needed justification, for I was sick and had lost all my worldly belongings and some three hundred precious photographs. I left Berbera with others on a hospital ship—and who should be the senior surgeon but Father Gill himself. We were treated wonderfully well, were taken to Bombay, and had a grand time in spite of the irksomeness of military hospital life there. The dental surgeon there was a Guy's man whom I knew, but his name escapes me persistently.

Then in October I left for Mombasa and Nairobi, at first being thoroughly disappointed in Kenya, but later falling in love with it. I spent some six months at a general hospital at Nyeri, near the base of Mount Kenya, where Lord Baden-Powell died. There were many Guy's men at Nyeri : the C.O. was Col. A. D. Williams who had retired from the Kenya Medical Service, there was Capt. Stanley Theis from Tanganyika and Capt. Stanhope whom I recognised from my gruelling hours in the Dental School. I knew that Col. Ogilvie had come to Nairobi, but when I visited H.Q. he had flown (literally, to the Cape I believe). Then I missed him when I left Nyeri, and again very narrowly in Harar, until finally I met him a few weeks ago in Berbera, still flying.

Some thirty miles from Nyeri is Nanyuki, and the equator passes, in an imaginary way, right through the bar of a pub there, so that one may drink beer with one foot bang on the equator, and look out on the snow on Kenya, with the evening sun making the bamboo belt on the mountain glow like a russet collar. Some infernally scientific gentlemen with theodolites and log-tables have, I believe, found that the equator really passes some few miles outside the pub, but such a lack of imagination should not be displayed towards an imaginary line. As far as I am concerned, I have started a pint of beer on one side of the equator and finished it on the other. And that satisfies me as far as the equator goes : it may now be shifted into Somaliland, and I shall drink beer on it again.

I think it was April's Fool's day exactly which saw me back in Berbera. I left the next day, covered in perspiration, to spend a couple of months in Harar and Diredaua, finally to return to the Camel Corps at Burao. I hesitate to give my impression of Abyssinia and the Ethiopians, for like the cartoonist who wished to caricature Mussolini and Stalin, I would like to know how the land lies first. But I can say that I thought it a white-man's-country, with magnificent mountain scenery, here rocky and threatening, there rolling and green and bracing. I missed seeing Addis. On the way to Addis (at Awash) the mosquitoes are so thick that they attack in formations and, I have heard, are capable of lifting the curtain up and letting in the infantry.

To descend from Harar through a delightful pass into Diredaua is virtually to come from Abyssinia into Somaliland.

And I thought the Italian uniforms were wonderful. My boy wears in the mess an electric-blue monkey jacket, with enormous brass buttons on it. I mention this because he puts the other boys in the shade, although I believe I am liable to be shot for letting him wear it.

I saw a certain amount of hospital work in Abyssinia by the Italians. In one or two cases I found a very apologetic atmosphere which struck me as pathetic. This was reflected everywhere. In two or three shops I have seen a roughly sketched placard : " Some of Ours Famous Mens," with a list underneath running from Dante to Dinglehoofer. On the second occasion when I saw this pathetic placard in a shop, I was accompanied by an Italian who spoke excellent English. He pointed to the blank space below the list and said " Also, of course, Il Duce, but *b—— him* ! "

I noticed that, after perhaps 18 months without getting any supplies, they were still using ethyl chloride for general anæsthesia and that many dressings were literally plastered with strapping. There were vast supplies of some things laid up in anticipation, but certain things were running very low. By packing the ethyl chloride in small permanently sealed tubes, closed after breaking the capillary tube by a screw-cap, the leakage was negligible compared with the sad losses from larger tubes with patent caps. Local anæsthesia was the vogue, but I noticed that although almost every laparotomy was tackled with tutocain or percaine the fluid was injected rather casually and mincingly with several punctures by the needle and that too many of the cases were assailed with ethyl chloride before the operation was over. I must confess that I was not much impressed by the surgery I saw, and of all the appendixes I saw removed (all females, as it happened) none seemed to be inflamed, nor were they examined closely as a routine. But I met some extraordinarily nice medical men in Harar.

My impression of the Italian medical services was a mixed one of admiration for certain aspects of the organisation and supplies, perplexity at the popularity of certain measures, and distaste for others. The whole thing was on a military basis from the start, so that there was a great deal of standardisation of material and on the whole a very sound organisation. I thought packings of the various drugs by such firms as the "Istituto Chimico-Pharmaceutico Militare " at Firenze, were very good—and I find the myriads of little tubes grand for collecting specimens. The packets of sterile gauze compresses are admirable, especially for out-station work in the tropics, and I would like to have them always.

The anti-venereal measures were most highly developed and spoke well of the salacity of their troops, and I shall say little about this, except perhaps that " prevention is better than cure " is probably an old Latin tag. Whilst musing a few days ago I tried to estimate how big an area would be covered by a protective layer half a millimetre thick, if all the *Pomata Antileutica* in Abyssinia were spread out with a giant spatula. But my brain shies at arithmetic, and at one time I managed to cover only the Sahara, and at another there were many square miles left over for application on the Moon.

The hygiene was often shocking, the general attitude apparently being that the whole world is a latrine (and every bed a thalamus). Doses are often homeopathically minute, so that the number of tablets in stock is sometimes deceptive. Popular remedies are salts and esters of benzoic acid and guaiacol, esanofelina an cacodylate.

Finally, everything seems to be injected but cough medicine. Even subcutaneous injection is not too popular. Putting it in a vein is the big idea. Yet, although everybody with a dose of malaria has quinine

injected in the bottom and a vein or two, not once but repeatedly, nearly all the tablets are sugar-coated quinine sulphate, which I imagine are passed intact except for some of the sugar. I have asked tactfully why injections are so popular, and from a conflation of authoritative answers, would say that the main reason for the movement is ultimately military: the dramatic effect of the injections (particularly intravenous quinine) enables men to be returned to duty quickly, and convalescence is itself shortened by the injection of tonics, mostly organic arsenic. One hears that the German airmen and others in Libya were armed with benzedrine, but I never saw this drug in Abyssinia, and perhaps its absence helps to account for the downfall of this part of the Roman Empire. But it is rather too cynical to suggest that if the Italians had had a dancing girl in front, benzedrine inside, and a bayonet behind, perhaps they would never have vacated some of their posts.

Another reason for injecting things is that the patients love it: they are suitably impressed. A dose of medicine by mouth might just as well be one of their own patent remedies. But an injection is different. Even quinine tastes better in the buttock. It gives a reassuring feeling there, like a hip-flask, there is much to be said for this. Having acquired a good supply of Veterinary sodium cacodylate, one ampoule of which suffices for one camel or thirty Somalis, I have been using it on all the troublesome patients and have found it to be, like powdered mummy with toad's urine, a sovereign remedy for everything from spitting of blood to warts on the knee-caps.

The real reason for the widespread popularity of injections in the tropics is of course that they have had a very dramatic result in the treatment of so many common diseases: syphilis, sleeping sickness, yaws, bilharzia, amoebic dysentery and so on, so that it is little wonder that the faith in injections by natives is universal. Somali patients—whose faith is derived from the injection of N.A.B.—are always demanding injections. Another drug which every native seems to be acquainted with is of course M. & B. 693. I found a Kikuyu, recently drawn from a primitive native reserve in Kenya, asking a chemist in Diredaua for "yem-bee sikis-tree." The chemist had not heard of the drug and there was none available anyway, and I told him so. He then pointed to a bottle on the shelf and said, "But that is also very good for the *kisonono*, *effendi*." It was a bottle of sandlewood capsules. Truly, the days when an ampoule of salvarsan was prized only as an ornament for ears are gone forever.

Somali medicine is peculiarly interesting, although I know almost nothing about it yet. The native psychology is also most interesting, and they need a good deal of understanding and are difficult and exasperating people to deal with without it. An intelligent race which leads a nomadic and hard life is bound to have an individual psychology. Centuries of nomadism in a rather unkind country have made them independent and selfish. Even tribal bonds are based on the tribal rather than individual ownership of stock. The fact that the country produces almost nothing but stock, whilst the natives are unable to make proper use of capital, means that the amount of stock increases and the land tends to become over-grazed, with all its unpleasant consequences.

The language is a difficulty, and the Somalis have every reason to be proud of a language which so cleverly combines the camel's gurgle with the retching of a drunkard and the sound made by a piece of mud hitting a kerosene tin.

Now the Somali, with all his daft ways and pig-headed ideas, is really no fool. Nor is he such a fool when it comes to medicine. During the last century, the explorer Burton, whom I cannot quote exactly, visited this country and walked from Zeila up into Abyssinia. He observed in his account that these ignorant savages believed that malaria was caused by the bites of mosquitoes, whereas of course we knew it was really caused by the bad humours rising from the swamps! The Somalis had suspected insect vectors long long before Manson found the filaria in the gnat's nostril. I wonder what Burton would have thought about his bad humours had he walked sixty miles without seeing any water, to find a highly malarious centre round a few wells in the wilderness? An up-country Somali had explained to me, "I scratched my leg with a thorn, and flies came and brought dirt to it so that it went bad." I think you will agree that these "savages" are not bad observers in the field. When I add that they are sensitive, highly excitable, and actually get drunk on milk, doubtless you will also agree that they are interesting.

Native medicine is mostly semi-surgical. The Somali usually heals remarkably well, and takes a severe operation very well even when wasted to a shadow with cachexia. Bleeding and scarifying, and cupping with a horn, are universal, as is cauterisation. Uvulectomies, and tonsillectomies of the one-bold-snip school, are common, and sometimes they even get away with partial blind avulsion of the epiglottis. By far the commonest treatment is cauterisation, and the medical officer must not feel offended if a patient sneaks out of hospital to be cauterised by someone. Sometimes sepsis gives rise to trouble.

Cauterisation is usually punctate and may be extensive, and the knob on an umbrella spoke makes an ideal tool. Sometimes there is an alteration in the consistency of the skin through a slight lymphatic oedema or a myxoedematous thickening. In these cases the little *chuff!* made by the quenching of the cautery had a slightly different and pathognomonic sound, and when heard, the operator calls out *chachaleh!* as one might cry *eureka!* The name is onomatopœic, and refers probably to a deficiency syndrome which responds to B_1 therapy. But of course, many odd conditions like chronic malaria, ambulant fever, gonococcal rheumatism and senile and menopausal troubles are called *chachaleh* loosely, and many a Somali Midgan or doctor will diagnose *chachaleh* in order to make the victim feel that he has had his money's worth—just as you or I might agree with grave nodding of the head with a mutual diagnosis of a gastric stomach or that strange anomaly, the sharp-pointed kidney which presses on the diaphragm and makes the owner a woman in a million.

I imagine a lot of coughing and scraping of shoes, which might mean that this letter is getting damnably long, but I cannot resist selecting a few items out of an indent sent in from an outlying station (Erigavo), which at the moment is manned by an old dresser. It shows what happens when the highly technical terminology of an old time dresser is filtered through the ears of an earnest Somali clerk. Some of the items may be rolled on the tongue like an all-day aniseed ball. And, *wallahi*, I have taken no liberties with the spelling.

8 bottls Esprin f blastin Dofer.
6 bottls Dafrs tablets (green 1 and 2).
2 Makeself tins.
2 tin custard oil.
1 lbs. porke powder.
12 bottls eggflaming tablets (sic.).
4 lbs. salphar aliment.
12 lbs. ginger Aideen ("Aideed" is a Somali name).
4 lbs. Ideen Foth.
12 lbs. sick ailment.
12 lbs. pork ailment.

6 lbs. Galserin blaltone.
12 Nasil glass.
4 Elaster plaster.
50 lbs. pork-lid.
3 doz. Adifom gaze.
1 sinse fercibs.
12 yards choclates (*chagnate*) (*sic.*).
2 Brobs.
3 ball Dressing.
12 urine pan.
20 spatting mug.

There is much more. My fallible translation is as follows, and may be printed upside down on page 86.

Aspirin, Phenacetin and Dover's; Dover's (gr. i and ii); Mag. sulph tins; castor oil; boric powder; acriflavine tabs.; sulphur ointment; tincture of iodine; tr. iodi fort.; zinc ointment and boric ointment; glycerin. belladonnae; Nozzles, glass (urethral); elastoplast of course; boric lint; iodoform gauze; sinus forceps; jaconet—this gave me a headache; probes; not what you think, but Bowls, Dressing; bottle; spittoon.

I take off my hat to you if you have read all this nonsence through without calling for your official dustbin. And I wish you, as a representative of Guy's, the best of luck.

Yours etc.,

J. R. AUDY,
Capt., E.A.A.M.C.,
Burao.

Somaliland Camel Corps.,
A.P.O., Berbera,
British Somaliland.

Correspondence

ACCOMMODATION FOR CIVILIAN SICK.

To the Editor of the GAZETTE.

SIR,—It has been represented to me that many Guy's men are under the impression that the Hospital is not playing its full part in providing for the In-patient needs of the Civilian Sick of London, and I am anxious to reassure them on this point.

The facts are as follows:—We have at present 110 beds available for Air-raid Casualties and 115 beds available for the Civilian Sick in Guy's itself, and 30 Casualty and 90 Civilian Sick Beds in the Guy's U.S.A. Hospital near Sevenoaks. There are, therefore, 205 beds available for the Civilian Sick, or about one-third the peace-time total of 618. Only three of the twelve London Teaching Hospitals are providing more than 205 beds for Civilian Sick, and two of these are fortunate in having Annexes which are very much larger than ours; the third, which has no Annexe, has so far escaped any serious war damage. It is interesting, and not irrelevant, to note that the twelve Teaching Hospitals, which in peace-time provide some 6,000 beds, are at present providing just over one-third of this total for the Civilian Sick. It will be seen, therefore, that Guy's is doing its fair share of this work as compared with the other Teaching Hospitals, although it has had so many beds put out of action by war damage.

At the same time it may be noted that we are "fathering" the largest and most active of all the London Sectors, and that, too, despite the fact that no Teaching Hospital in London has given a higher proportion of its peace-time Staff to the Services.

I hasten to add that I have not detected in any quarter any complacent self-satisfaction with the above state of affairs. That Guy's should make a still larger contribution to the national effort at this time, if it can, is clearly desirable, and I think I can assure Guy's men that if it can be done, it will be done.

Yours, etc.,

T. B. JOHNSTON.
Superintendent.

Guy's Hospital, S.E.1.

QUALIFYING EXAMINATIONS.

To the Editor of the GAZETTE.

SIR,—The remarks in "Passim" and the letter by "Senex" in the following number of the *Gazette* present one side of the argument. There is another, equally cogent, to be expressed.

The high standard of certain University M.B. finals is deliberate. These examinations are intended by the examining bodies to reflect their University's standards in the Faculty of Medicine, without regard to the minimum standard essential to qualification. Candidates are expected to display that little extra something that the others haven't got; and to succeed they must give proof of a better clinical ability as well as wider theoretical knowledge, than that possessed by the man who on qualification is simply fit to do supervised work, as suggested in "Passim."

It is just this acknowledged distinction that gives these University degrees their standing and their added respect. That is why they are coveted by people already possessed of a simpler qualification; that, too, is why unsuccessful candidates advocate their abolition or degradation.

In all genuine goodwill and justice it is difficult to understand how "Senex" can still think he was entitled to become a London Graduate when all that prevented him was failure at the final examination for graduation. He complained, not that the examiners were unfair in their findings, but that the standard was too high. Is it not simply the ability to attain this standard that entitles a man to become a graduate?

Those who have succeeded at these University examinations are in their turn entitled to expect that the standards will nor be lowered, nor the value of the degrees cheapened, in the future. If a one-portal entrance to the profession is desirable it would surely be sounder in the long run to raise the common standard to that of the M.B., B.S., rather than to debase it. Expediency is a treacherous policy—even in war-time.

Yours, et.,

D. STAFFORD CLARK,
Squadron Leader,
R.A.F.V.R. Medical Branch.

R.A.F. Station,
Waterbeach, Cambs.

STUDENTS' UNION.

To the Editor of the GAZETTE.

SIR,—The object of this letter is to report on the work of the Tunbridge Wells Committee of the Students' Union and to outline its plans for this term.

Soon after the Committee was established we pursued our object of organising students in relation to the War effort by arranging a scrap-metal collection and a

" Books for the Forces " day, and we started a successful Guy's Warship Week. The formation of the new workshop at 5, Sandrock Road has received our enthusiastic support. The urgent question of War work for students in the long vacation is being investigated, as is the possibility of a vacation term.

We have represented the interests of students in several matters. We have sent delegates to two medical student meetings, where the formation of the new national medical student organisation was discussed. We have particularly inquired into the relation of dental students to the new body. We have asked that those scholarships and prizes which were discontinued on evacuation be re-opened for competition. The authorities were asked to modify the liability of students serving in the A.R.P. services to do duty, three nights a week, right up to a major exam. A scheme for the sale of second-hand books was put into operation and is now working well.

A further object was to stimulate interest in cultural activities. To this end we have revived the Debating Society and started a Dramatic Club, which is now well established and out of our hands.

This term one of our chief concerns must be the work on the Students' Memorandum on Medical Education, asked for by the Medical Planning Commission of the B.M.A. We are going to hold discussions on the curricula and methods of teaching. Ours is the responsibility for the pre-medical and pre-clinical part of the Guy's contribution to the Memorandum.

We have to settle the question of the relation between the Clubs' Union and the Students' Union. At a general meeting in this sector the great majority were in favour of an amalgamated body. There is room for much discussion on this issue and we are conferring with representatives from the other sectors to decide our best plan.

Our further support must go to the workshop venture to ensure that it is the tremendous success it deserves to be.

Yours, etc.,

IAN A. H. MUNRO

Hon. Sec., Tunbridge Wells Committee, Students' Union.

Hill Crest,
Pembury, Kent.

On behalf of the Committee :—P. A. L. CHAPPLE, J. HODGE (1st M.B.), E. R. ARNOLD, K. Y. KHONG, J. M. PUGH, I. A. H. MUNRO (2nd M.B.), A. C. CAMPBELL (Conjoint), A. S. DIXON (Pembury representative).

Sport

Rugby

GUY'S *v.* WELSH GUARDS.

(Played at Honor Oak Park on Saturday, March 28th.)

THE last home fixture was well attended for the visit of the Welsh Guards, who had built up quite reputation for possessing a powerful side, but, unfortunately, several of their stars were absent.

Guy's were in excellent form, especially Strathie, who frequently bamboozled the opposing backs with his peculiar hop step and sudden burst. Kyle, playing his first game for the 1st XV, showed a fine turn of speed and a deceptive run. On this form he should more than adequately fill the position left vacant by Gartrell, who is now qualified. Guy's forwards were more than a match for the vigour of the Guards.

The game opened with Mullins leading a forward rush, but were forced back for a scrum under the posts. Twice the Welsh were penalised for offside inside Guy's half. Lillywhite followed up a punt ahead to collar the Guards full back in possession. Brittain led a forward rush from a loose scrum, and Lewis made further ground with a long kick from a free-kick for offside. Quick, the Guards fly-half, was too individualistic to be of use to his backs and was frequently tackled in possession. Guy's kept the ball moving briskly; Camp ended a run with a cross-kick for a scrum, and a chance to score was lost through a dropped pass. Offside again spoilt a Welsh movement in Guy's " 25," and from the line-out Brittain broke away and passed to Breen-Turner, but Kyle, taking the final pass, was tackled.

Lewis halted a Guards' forward rush by finding touch, and Kyle did well to throw his opposite number into touch. The Guards pressed for a while with some clever dribbling, but on returning to the attack Guy's had another free-kick, which was followed by Brangwin kicking nicely to touch when tackled. Again Lewis made things awkward for the Guards with a fine kick, and Guy's backs handled smartly, Camp finishing the movement with a cross-kick, but the Welsh had a drop-out. Another combined three-quarter movement by Guy's followed, and after Strathie had tricked his opposite number, passed to Camp, who ran in for a try too far out for Mullins to convert. In the next minute Guy's nearly scored again from Camp's cross-kick, but somebody in the excitement got offside.

In the first minute of the second half Strathie made a grand opening for Brangwin, who ran strongly to send in Kyle, who had precious little room, but went over in a flash for an unconverted try. The Guards introduced more vigour into their play, but Guy's excellent defence stood as firm as a rock. The Guards had one golden chance, but Thomas was immediately tackled as he gathered a punt ahead by Quick. The Guards had a lucky escape when they prevented Kyle from crossing near the corner flag with a heavy tackle. The ball came across to Strathie, who took a left-footed dropped kick which missed by a hair's breadth.

Hereabouts the game was all Guy's. Kyle was forced into touch when almost over, and Brangwin punted too hard over the Guards line, but from the drop-out Guy's found touch; the line-out was followed by a scramble, from which Brittain emerged to score a snap try.

Offside prevented the Guards from taking advantage of a scrum under Guy's posts, and a forward pass stopped another Welsh movement. Both packs dribbled in quick succession, but Strathie made a nice kick to touch, which was followed by Lee tackling the full-back from a cross-kick by Camp. Lewis came into the attacking movements, but knocked-on as he gathered the ball from his own punt. Strathie almost got over from a clever dribble, and Lewis again came up to get the Welsh confused; he gave a pass to Camp, who jumped over two prostrate defenders for a try which Mullins converted.

A cross-kick by Strathie ended in a scrum and, followed by excellent passing between the backs, Strathie

got possession, beat two players before passing to Brangwin, who beat another two before touching down for a splendid try, which Mullins converted.

Score: Guy's, 2 goals, 3 tries (19 points); Welsh Guards, nil.

Team.—T. L. T. Lewis; R. F. Camp, D. M. Strathie, P. L. Brangwin, J. B. Kyle; W. H. Lillywhite, N. I. Scott; B. H. Wilshere, A. B. Lee, R. G. L. Brittain, A. G. Albers, J. R. C. Matthews, T. W. Renton, J. Breen-Turner, M. R. Mullins (captain).

Hospital Information, etc.

Pass List

L.D.S.

FIRST AND SECOND PROFESSIONAL EXAMINATION.

April—May, 1942.

Dental Mechanics.

C. G. Bason
A. J. Bridge
K. H. Brown
J. W. Coombs
D. C. Dawson
H. E. P. Grabashey
J. D. Green
P. C. Hanley
E. K. Harris
F. B. Hickman
P. J. Hill
C. S. Matthews
P. Maxwell-Stephens
P. T. Parr
K. G. B. Pritchard
J. S. Spencer
I. T. M. St. George
G. Thompson
H. I. Tozer
M. G. Trott
B. S. Wilson

Anatomy and Physiology.

C. C. Bull
J. G. Davimes
J. E. De Bout
P. Griffiths
F. B. Hickman
M. C. Hudson
K. M. Little
K. G. B. Pritchard
E. H. Sudell
A. J. Swann
B. Watton

Special Anatomy and Physiology.

L. R. E. Bradford
P. C. J. Crisp
A. J. R. Davies-Evans
W. R. Hall
R. C. Lawrence
D. S. Nelson
J. P. Pearce
G. N. Pleasant
D. J. Rayner

ROYAL COLLEGE OF SURGEONS.

L.D.S.

FIRST PROFESSIONAL EXAMINATION.

April, 1942.

Dental Metallurgy.

J. F. Bowes
G. T. Crook
J. F. H. Flanders
M. C. Grant
W. D. Hannaford
C. M. M. Jenkins
P. C. Matthews
E. McSycamore
J. D. Rumble
I. D. L. Thomson
A. J. L. Wheatley
E. H. Williams

THIRD (M.B., B.S.) EXAMINATION FOR MEDICAL DEGREES.

April, 1942.

Pass

P. R. C. Evans
G. T. Hammond
H. P. Jones
G. C. Kennedy, B.Sc.
J. K. Martin
V. H. Martindale
P. B. Maxted
G. E. McFall
T. McKeown
L. F. Miller
A. C. Parkinson
R. J. W. Rees, B.Sc.
J. S. Stead
S. D. Stock
J. Wilks

PART I.

S. H. Bockner
P. S. Cuthbertson
D. P. Davis
G. W. Downes
Roy Franey
E. O. Hohn, B.Sc.
P. W. Hopper
J. N. Hunt
P. L. Masters
H. C. Mukerji
H. F. Osmond
J. D. Paulett
H. A. Ripman
F. H. Staines
B. J. Stephens
C. H. Watts

PART II.

W. G. Cross, B.D.S.
D. D. Rees

PART III.

P. Baxter
P. B. Counsell
R. A. Gill
D. H. King
G. H. T. Lloyd
H. A. Ripman

The Services

Awards

Captain A. M. Cantor has been awarded the Military Cross for bravery and devotion to duty in the Middle East.

Casualties

We regret to report that in a recent casualty list the death of Major R. L. Frost was announced; and that Captain J. A. Glover has been missing since the fall of Singapore.

Death in the Service

Lieut.-Col. C. C. G. Gibson, R.A.M.C.

Births

BRAIN.—On May 17th, 1942, at the Summer Court Nursing Home, Southborough, to Irène (née Griessen) wife of F. H. Brain, Ph.D.—a son.

DAVIES.—On April 25th, 1942, at Marlborough Nursing Home, Reading, to Vera (née Spencer), wife of Lieut. A. P. Davies, A.D. Corps—a son.

EDWARDS.—On April 14th, 1942, to Mollie (née Davis), wife of Captain Richmond Edwards, R.A.M.C.—a son.

HARDIE.—On May 17th, 1942, at the Nuttall Home, Kingston, Jamaica, to Margaret (née Payn), wife of Captain John Blair Hardie, of the A.D. Corps—a daughter.

Marriages

FLITCROFT-GREAVES.—On May 2nd, 1942, at Aldershot, Flight-Lieut. James Herbert (D.), R.A.F., son of T. H. Flitcroft, of Swansea, to Betty, younger daughter of Captain H. Greaves, A.D. Corps.

Deaths

HIRSCH.—On April 23rd, 1942, in London, Leonard Hirsch, C.I.E., Lieut.-Col. I.M.S. (retd.), aged sixty-two years.

RAWNSLEY.—On April 15th, 1942, at Malta, Thomas Rawnsley, C.B., C.M.G., Colonel R.A.M.C. (retd.), aged seventy-six years.

Eds. { H.F.O. P.L.M.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *13th June* 1942 — *Number* 1406

PASSIM

MR. ERNEST BROWN announced recently that the military situation now required, during the next few months, an acceleration of the withdrawal of civilian practitioners for the Services. He added that it would be necessary to curtail the period during which newly-qualified practitioners remained in hospital appointments. Their place would have to be taken by women practitioners and by male practitioners not liable for service. This implies that all newly-qualified male practitioners who are medically fit will be called up after holding hospital appointments for six months, i.e., they will not be allowed to take B 2 posts, while those now holding B 2 posts will not be permitted to take B 1 posts. As further evidence of the offensive intentions of the Government in the near future this statement is very welcome. It does, however, raise in a more urgent form a matter which has caused dissatisfaction for some time, namely, that the Army medical officers stationed in this country have often had little to do, whereas the civilian practitioners and hospital staffs have been much overworked. The position could be improved if Army medical officers were allowed to hold civilian posts after completing their military training, or to hold part-time appointments in neighbouring hospitals. In this way they would gain a wider experience than the Army offers and at the same time relieve the burden of the hospital staffs.

Our Minister of Health also mentioned that he had submitted to the General Medical Council a proposal that there should be some curtailment of the period within which medical students could become qualified. The G.M.C. has now given its approval to the reduction of the period of clinical study to thirty months by any licensing body which thinks fit to do so, provided that the standard is not lowered. Thus the medical student is being asked to speed up his productive effort in common with other war workers. The proviso that the qualifying standard should not be lowered is an important one, in the interests both of the medical student and of the members of the armed forces upon whom he will practise.

THE urgent need of the Services for young men raises the question of women students and practitioners. It is a commonplace that women are playing an increasing part in almost all branches of the war effort. Not only do they constitute a high proportion of the factory workers, but they are members of all three services and carry out such "masculine" jobs as the operating of balloons and the firing of anti-aircraft guns. In contrast the number of women medical students is remarkably small and must remain so as long as most medical schools will not admit them. Thus, out of the twelve medical schools of London University, one is open to women only, two are open to both sexes and the rest are open to men only.

What are the objections to women students and doctors? Firstly, it is widely held by medical men that women make bad doctors. This view can hardly be based upon the contention that women are in general less capable and intelligent than men, at a time when women are taking on efficiently so many jobs previously confined to men. Are there any special qualities necessary for a good doctor which women lack? This question is a delicate one upon which reliable data are lacking. Readers of "Man and Woman" by Havelock Ellis will remember that it contains a lengthy discussion of the available evidence without any clear-cut conclusions being reached. It may, perhaps, be admitted that women are not noted for the independence and originality of thought needed for the advance of medical science, as of any other science. On the other hand, attention to practical details and the ability to deal with people, which are qualities so necessary for the general practitioner, are usually considered to be well marked in women. Like other minorities women doctors suffer from the misfortune that the black sheep among them are remembered as

" bad women doctors," while their male counterparts are just " bad doctors."

Secondly, it is often urged that many women doctors marry and then give up professional work or are unable to devote sufficient time to their families. The latter objection also applies with less force to men doctors and, in so far as it applies particularly to the medical profession, can be met by the adoption of a scheme which enables general practitioners to have regular hours. With some diffidence we mention an argument much used by men students to the effect that women students would distract them from their work. Distractions of a similar nature are not difficult to come by under present conditions. It is even possible that the prevalent view of the male student that the main function of women is to provide " distraction " for man will be modified by association with women on equal terms. Doubtless the question of women students is being considered by the B.M.A. and the B.M.S.A. in their post-war plans, but from the point of view of the war effort an immediate decision is needed.

THOSE who are working for pathology are faced with the task of mastering the contents of the formidable array of bottles in the Gordon Museum. The comprehensive nature of the collection renders it unsuitable for the use of the student, who wishes to grasp the typical appearances of the more important conditions before considering the atypical and the rare. Dr. Nevasquez has formed an excellent collection of bottles at Farnborough for the use of students. We suggest that space could be set aside for a similar collection in the Museum.

IT has just come to our notice that arrangements are being made to convert a room in the basement of the New Pathological Block into a canteen for students. Everyone will agree that the overcrowding of the present canteen on the first floor renders an additional room very necessary. It appears to have escaped the notice of those concerned, however, that the proposed room provided an invaluable refuge for patients evacuated from Miriam at the beginning of the " blitz," owing to its position in the basement of a ferro-concrete building. Considering that our basement accommodation is very limited it is most important that all available space should be ready at a moment's notice for the reception of patients. The use of such space as a canteen will prevent this, and, moreover, a counter is being erected in such a position that the movement of stretchers will be seriously hampered. Surely some other accommodation could be found, such as the experimental physiology laboratory, which is near the present canteen. We hope that this matter will receive the earnest attention which it deserves.

The Lancet has lately commented upon the Anti-Vaccination League; a Guy's man in the Sector has sent us three of their pamphlets. The first describes post-vaccinal encephalitis with relative sobriety. The second is a real shocker, ending with a lively paragraph, headed " Does Vaccination cause Loathsome Disease? " That it does is shown by the following brief testimonies, both of them undated and without context. Here they are: Dr. Wilder, " Consumption follows vaccination as effect follows cause." Dr. W. Forbes Laurie, M.D., " I can add my testimony to that of Dr. Auge to . . . . to the great increase of cancer " (Prof. Op., p. 16). The cryptic reference at the end is little clearer than the rest of these anti-vaccinal snippets. The *Gazette's* readers do not need to be convinced that these sheets are of little or no help to the nation's health, but the last tract headed in scarlet, " How to avoid vaccination " is unforgivable. Whether the preceding ones are waste paper or not is a matter of opinion; here it is a fact, the handbill is printed on one side only.

CONGRATULATIONS to our Matron, Miss E. E. P. MacManus, on her election as President of the Royal College of Nursing. This is a fitting celebration of her return to the College Council after her enforced absence owing to ill-health.

POSTSCRIPT.

A NUMBER of handsome new aluminium-painted stretchers can now be seen about the Hospital. They have wheels which stay on when the trolleys are lifted. The stretchers have no legs, which is a disadvantage, but since delivery has taken more than six months one cannot be over-critical. The arrival of these stretchers had nothing to do with an appeal for more trolleys in " Passim " some weeks ago.

CANDIDATES' EFFORTS IN A FINAL EXAMINATION.

" Bile assist in digestion; therefore digestion is assisted which in turn assists the passage of fœtal matter in the intestines and colon so that waiste matter may be illuminated from the body. There is a general hyperæmia and the patient will flow."

Some Recent Breast Cases

By N. L. Eckhoff, M.S.

I HAVE chosen this title for to-day's lecture, since it has been my fortune to see about a dozen interesting and instructive breast cases in the last week or two, four of them within the hour on the same morning. I propose to relate the essential points in the history, to describe (with diagrams) the physical signs, and try to deduce a few lessons.

Let me first remind you to start examining a breast case by palpating the opposite breast, the axillary glands, infraclavicular and supraclavicular glands of that side, then the supraclavicular, infraclavicular and axillary glands of the diseased side, and only then the breast producing symptoms. Let me also strongly recommend the practice of drawing a little sketch on your note-sheet, for this will often convey a better idea to you later than a whole page of notation.

CASE I.—This was a nurse, aged twenty-nine, who presented herself with complete nipple retraction and a small hard lump immediately lateral to the nipple. She had noticed the retraction for 3–4 weeks and a painful lump for one week. The doctor, the patient and I had the gravest suspicions, but owing to the short history, I advised aspiration to be followed by incision, and, if necessary, amputation. Aspiration immediately produced thick milky fluid. Without removing the needle I made a radial incision, and was able to extirpate a cyst, placed almost entirely beneath the areola. When this was removed the nipple quickly sprang back into place. The section report stated that the condition was not malignant but resembled a dilated duct. I am satisfied that the condition was due to the dilatation of one of the main ducts of the breast, and might almost be called a galactocele, although the latter condition is said to be restricted to the lactating breast.

CASE II.—The second case was that of a large woman aged thirty-nine, who had notcied a lump for three weeks, with no pain at first, but some for the last few days. The lateral half of this large breast was extremely swollen, with redness and œdema of the skin, and very marked nipple retraction. No glands were palpable. The temperature was 99 and the pulse 120. The whole thing looked like an enormous carcinoma due to fungate at any moment, but, in view of the short history, I made bold to diagnose an abscess. Within a few days a considerable quantity of pus discharged spontaneously and the swelling was much reduced in size. Seen three weeks later, when the inflammatory reaction had largely disappeared the breast was the same size as the other one.

Breast abscesses usually occur in the lactating period. They may be single, large and multilocular, or small and multiple. One patient I know of had twelve different abscesses dragging on for a period of twenty-six weeks. It is customary to describe supramammary, mammary and retromammary abscesses, but the vast majority are mammary, and take origin in a cracked nipple, from which the spread may be *via* the ducts or lymphatics. The usual treatment is incision and drainage, though some surgeons get good results with aspiration. Success in this method seems to depend upon close daily observation and repeated aspiration with a view to keeping the abscess cavity as empty as possible. On Tuesday I saw a woman completely cured by aspiration, who had originally suffered from acute puerperal hemolytic anæmia with hæmoglobin of 20 per cent., and would not have survived operation at that stage.

Breast abscesses occasionally occur in a non-lactating breast, and the ætiology is not easily discovered.

CASE III.—The third case was a patient of sixty, who had noticed pain in the right breast for two months, and a lump for three weeks only. The lump was small and hard, fixed to the skin in parts, situated in the upper and lateral part, and many axillary and one supraclavicular gland could be palpated. Diagnosis: carcinoma of long standing, unknown to the patient.

CASE IV.—The next patient was a very intelligent old lady of sixty-eight, who had concealed a small, hard breast tumour for a year to save her family anxiety. It was interesting that no glands were palpable and that none could be shown to be enlarged at the operation. Macroscopically, this was a small, hard scirrhus tumour, such as is commonly seen in elderly women, and I have no doubt the section will confirm this. It is sometimes a matter of opinion whether operation should be performed in the very elderly with the shrunken "atrophic" scirrhus carcinoma, for the tumour is very slowly growing and may be present for years without metastasis.

CASE V.—Another woman, aged forty-eight, had concealed a tumour for two years, and presented herself with a large carcinomatous ulcer about 2½ inches in diameter, fixed to the pectoral

muscles, with a large gland in the axilla fixed to the skin, and many smaller glands deep in the axilla. For cosmetic reasons it was thought advisable to remove the offending and offensive breast, and as she was a thin, spare woman, it was quite impossible to bring the edges of the skin together after adequate excision had been performed. A defect 6 by 4 inches was covered by an immediate razor graft (cut in two pieces from the thigh) and the area was healed in fourteen days.

The lesson of these cases is that it is amazing how common it is to find, even in these enlightened days, concealment of a breast tumour for far too long, either through ignorance, misguided self-sacrifice or folly.

CASE VI.—Another poor patient, aged thirty-five, an A.T.A., doing excellent work, was first seen six weeks after suffering an operation at the hands of a refugee doctor, of uncertain credentials. His skill was reckoned by the fact that he took only three hours over the operation, and by his own statement that he had more radium than any other person in this country and that he had brought it with him from the Continent!

The whole of the right chest was covered with cancer *en cuirasse*, with a *transverse* scar running across it, only partially healed, while in the axilla was a large fixed mass, the skin over which was deeply pigmented from radiation treatment. To add to this shocking tale he had performed a simple mastectomy on the other side too, as this breast was said to be affected with mastitis. I saw her six weeks after this terrible outrage, with metastases in the liver and vomiting, dulness at the left base and hemoptysis, from pulmonary metastases. She died in fourteen days.

I have already mentioned an instance when it was thought wise to remove a tumour for cosmetic reasons in a fairly advanced carcinoma, but I do not think any British surgeon would ever perform such a mutilation as I have just described, in the presence of extensive skin involvement and advanced metastasis.

CASE VII.—A doctor telephoned one evening to say that he had removed a localised tumour from the breast, thinking it to be an area of mastitis, when, to his horror, the section report stated carcinoma.

It is generally believed that incision into a tumour increases the rapidity of metastasis, and since nothing short of radical amputation suffices for carcinoma, I advised this and carried it out forthwith. A defect 4 by 3 inches was grafted immediately, and the whole area was healed completedly in fourteen days, so that deep X-rays could be started. Histology of the glands and a portion taken from the centre of the previous scar revealed inflammatory reaction only. I am still awaiting the original section for comparison. The doctor tells me the original tumour had been present for months, was painful and tender, movable and not attached to skin, and could not be felt with the flat of the hand. No glands were palpable.

I have only once before performed a radical amputation after some other doctor had done a local excision, and the patient died of spinal metastasis in two years.

Except in the case of fibroademona or a single cyst it is not often desirable to do a local removal of a lump from the breast.

CASE VIII.—Practically all cases af carcinoma can be diagnosed on clinical grounds. In the few doubtful cases it is permissible to incise into the tumour, when macroscopic diagnosis can promptly be made and the radical operation completed at once, if necessary. In chronic mastitis the change is usually so widespread that a complete mastectomy is preferable. Nevertheless, the same doctor the same day sent me another patient in whom I thought it justifiable to remove the lump only. She was thirty-seven and had noticed a lump in the left breast for eighteen years, getting bigger lately and painful at times. On examination, there was a firm, but not hard, irregular lump, with that elastic feel associated with mastitis. There was no attachment, no nipple retraction, and no enlarged glands were present. I was sufficiently confident that this was a localised area of mastitis, the rest of the breast being normal to feel, that I removed the lump only, through an incision along the lateral part of the breast, approaching the breast from behind. The macroscopic report was "chronic mastitis with dilated ducts."

CASE IX.—A patient of forty-seven had had an operation for breast reduction seven years earlier. She came to me because she still had enormous breasts, reaching nearly to the umbilicus, in one of which was a hard globular lump. The lump was clearly translucent, and many further lumps could be felt in the breasts, both of which were nodular. I had no doubt that this was an instance of that fibrous degeneration seen in most cases of great hypertrophy, and felt that further plastic surgery was contraindicated. Both breasts were removed last week, and macroscopic examination revealed much fibrous replacement and multiple "blue domed" cysts. Microscopy not to hand.

To be able to tell the patient that a lump is a cyst often greatly relieves anxiety (in the above case a gynæcologist diagnosed carcinoma mammæ), and converts what might be a radical operation into a simpler procedure, to be done at leisure. In this sense needling may be justified, but is better deferred till the time of operation, for if needling proves the tumour to be solid, this very act may stimulate growth, unless amputation follows immediately. Nor does the finding of fluid necessarily exclude carcinoma.

CASE X.—A primipara of thirty-nine, just back from Singapore, developed a breast tumour in the eighth month of pregnancy. The tumour was not as hard as most carcinomata, and the rest of the breast was nodular. As I was particularly anxious to get her a live baby, I aspirated the breast and withdrew 8 c.c. of dark fluid, such as is not infrequently seen in cysts, and recommended expectant treatment. She had a labour lasting many days, including manual rotation and forceps delivery, lost her baby and nearly her own life, and still had to undergo a radical operation—for the tumour was all the time a carcinoma. To make matters worse she developed axillary phlebitis, with a high temperature, seven days after operation.

Transillumination can be of use in the diagnosis of breast tumours, for a solid tumour is denser and a cystic tumour less dense than the normal breast tissue. But not long ago I demonstrated at Out-patients' translucency in a tumour which had the other features of a carcinoma and, at the operation, turned out to be a colloid carcinoma.

CASE XI.—A stout woman of forty-seven presented herself with a lump in the lateral part of the breast, irregular, fairly hard, a little tense. A surgeon diagnosed mastitis and removed the tumour. Histology revealed fat necrosis. I saw her last week, two years after the breast operation, with two tender lumps in her arm and one on her leg. She told me they were getting smaller. They were rather flattish lumps, about an inch in diameter, situated in, and merging into, the subcutaneous tissue. I diagnosed further fat necrosis.

Fat necrosis is well recognised in acute pancreatitis, but it is not so well known that it may occur in the abdomen in perforations, or without any other lesion, or in the breast or fatty tissue anywhere. In the breast it forms a tumour not easily distinguished from carcinoma.

A man of seventy-three is lying in a hospital I visit with mastitis, non-suppurative, responding to treatment. This merely serves to remind you that various breast lesions may occur in the male, and that mastitis may occur shortly after birth, at puberty, or during adult life. In the latter case it is well to advise the patient to give up wearing braces, or at least to have the button sewn on his trousers, for when a button is missing the metal part of the braces strikes the breast and causes frictional mastitis.

I have not seen any case of fibroadenoma in the last week or two, but am able to show you some photographs of two cases I had some time ago, with enormous soft fibroadenomata. The more common variety is the small hard fibroadenoma.

To summarise: Swellings may occur in the male or female breast, and include many different conditions. The four common swellings are: fibroadenoma, carcinoma, mastitis acute and mastitis chronic.

Fibroadenoma is usually a hard, irregular, freely movable tumour in a young woman, without pain or glandular enlargement. The treatment is removal.

Carcinoma is a hard, fairly regular, non-movable tumour in a man or woman of any age, with some pain and some glandular enlargement. In late stages involvement of skin and muscles is to be expected. Treatment: radical amputation, removing a large area of skin and a still larger area of deep fascia, the pectoral muscles, glands and breast in one piece. Immediate skin grafting is better than skimpy skin removal or suturing under tension. No surgery in advanced cases, except to remove an offensive mass, and no surgery in the atrophic schirrhus tumour of the aged.

In *mastitis, suppurative*, consider repeated aspiration, although this is probably more tedious and more painful than incision and drainage. In mastitis of the male or youthful breast, treat conservatively with application of mercury (Scott's) ointment.

In *mastitis, chronic*, most frequently advise simple mastectomy, but occasionally local removal of a cyst or sector. In the large hypertrophic mastitis advise mammaplasty or amputation, depending on the age of the patient.

The cases I have related to you illustrate some of these points, but they also illustrate that no single clinical sign is invariably diagnostic—e.g., nipple retraction in inflammatory swellings, translucency in solid swellings, etc. I have not had time to talk to you of discharge from the nipple, another sign of importance occasionally observed.

These cases have mostly been sad ones, and I do not wish you to think that these difficulties are common. They merely add a certain spice to the art of clinical diagnosis.

Zinc Protamine Insulin

By G. R. W. N. Luntz

I.—ITS PROPERTIES AND ADVANTAGES.

MUCH interest has been aroused during the last five years by the introduction into clinical practice of zinc protamine insulin, produced by D. A. Scott, of Toronto. A considerable number of favourable reports on the clinical use of Z.P.I. in the treatment of diabetes mellitus have appeared in the literature. In view of these reports there can be no question regarding the more prolonged action of Z.P.I. as compared with that of insulin hydrochloride (ordinary, unmodified, regular or soluble insulin). The clinical experiences recorded in papers in both the United States and Great Britain are in remarkable agreement. In use this preparation possesses the features of delayed onset in action and prolongation of its maximum effect for several hours beyond that of ordinary soluble insulin. All of which establishes clearly that Z.P.I. is a more effective therapeutic weapon than ordinary insulin.

Duration of Action of Z.P.I.—Numerous reports have appeared on the approximate duration of action of Z.P.I. in diabetics. Most of the statements on this subject, based on observations made in the first few months after Z.P.I. became available in England and America, have been to the effect that the action could be prolonged beyond twenty-four hours. R. D. Lawrence and Nora Archer (1937) wrote that moderate doses continued their action for twenty-four hours, larger doses even longer. T. Izod Bennett and his colleagues (1937), on the other hand, were "unable to confirm the suggestion that cumulative effects might occur" from a prolongation of action beyond twenty-four hours.

R. S. Aitken (Oct., 1938) made precise observations on a limited number of diabetics with a view to determining how long Z.P.I. acts when used in routine treatment. His observations indicated that the total duration of effect of doses lying between 15 and 100 units is 15–60 hours.

Generally speaking, Z.P.I. begins acting in 9–11 hours and achieves its maximum effect in 15–20 hours. But it should be remembered that Z.P.I. does not behave with arithmetical regularity in every patient. Divergences may be attributable to :

(1) Irregularities in its rate of solution, depending on varying conditions of the tissues and their blood-vessels at the site of injection.

(2) Varying degrees of spread of the suspension through the tissues.

(3) Fluctuation in the severity of the diabetes itself.

Injection of Z.P.I. an Imperfect Substitute for Natural Pancreatic Secretion.—Treatment in diabetes should be emboldened to adapt insulin injections to imitate as nearly as possible the natural secretion of insulin in normal individuals. In the latter R. D. Lawrence's view is that there is :—

(1) A small continuous secretion of insulin from the pancreas which controls endogenous sugar production ; and

(2) An added intermittent secretion of insulin to deal with exogenous sugar absorbed from carbohydrate digestion.

An injection of Z.P.I. cannot imitate exactly such a double function. The injected material serves as a depot ; from it, insulin enters the blood presumably at a constant rate rather than by adjustment to the needs of the body. Normal pancreatic islands supply insulin intermittently as is required at the time.

With a single moderate dose of Z.P.I., say about 20 to 30 units, there is a slow, steady absorption of insulin over a period of about 18–26 hours, compared with the much more rapid absorption of soluble insulin ; this slow absorption more nearly imitates the gradual mobilisation of insulin in the non-diabetic organism from the islands of Langerhans, and therefore it facilitates in a more natural and efficient way the control of hyperglycæmia when the dosage is adequate.

However, as Z.P.I. must be deposited in the subcutaneous tissues by a hypodermic syringe, it is obviously not possible to secure from this store the increased insulin mobilisation, with its delicate regulation, that comes from the normal pancreas in response to the rising blood-sugar which ordinarily follows a meal rich in carbohydrate ; yet, the slow continuous absorption of insulin which has been set free from the store at the injection site may approach the ideal more closely than the more rapid absorption that occurs for a shorter period when soluble insulin is used.

Effects of Z.P.I. approximating to Normal Secretion of Islets of Langerhans.—The main difference between the actions of Z.P.I. and ordinary insulin is the prolonged and more gradual hypoglycæmic effect of the former. All workers are agreed that the presence of zinc intensifies the retarding effect produced by the protamine.

In the healthy subject the ingestion of carbohydrate stimulates the endogenous production of

insulin in amount sufficient to limit the rise of blood-sugar. This cannot be imitated by Z.P.I. which, being released at a more or less constant rate irrespective of the amount of glucose to be dealt with, cannot prevent alimentary hyperglycæmia. This, however, is transient, and there is no definite evidence that occasional hyperglycæmia *per se* is harmful. What is of much more serious import is the hyperglycæmia arising from the breakdown of the tissue reserves. This is almost invariably accompanied by excessive production of ketone bodies, and is undoubtedly harmful if allowed to continue for too long a period.

The young diabetic is particularly susceptible to the factors leading to excessive ketonæmia, with the result that a condition of coma is rapidly precipitated. After relatively short periods of ketonæmia irreversible changes may occur in the tissues, especially the nerve cells, with the result that the blood-sugar may be reduced and the alkaline reserve raised to within normal limits without preventing a fatal issue.

It is in the prevention of the hyperglycæmia resulting from tissue breakdown that the effect of Z.P.I. approximates to the natural control of the blood-sugar by the continuous secretion from the islet cells of the pancreas. For this purpose adequate doses of Z.P.I. are necessary; when the amount injected is insufficient, hyperglycæmia may be more or less continuous throughout the twenty-four hours. In a patient successfully controlled by Z.P.I. the blood-sugar curve is fairly constant from day to day. Z.P.I. is the only preparation given in one daily dose which can be used in sufficient dosage to exert an influence for 24 hours without inevitably causing hypoglycæmia.

Optimum Time for Administration of Z.P.I. and Technique.—It appears, at least in mild and moderately severe diabetes, that a single dose of Z.P.I. may be administered at whatever time of day the patient prefers. Examination of the superimposed blood-sugar curves in cases of mild and moderately severe diabetes reveals the fact that the curves are remarkably similar regardless of the time of administration of Z.P.I. This, of course, is a definite advantage in the use of Z.P.I., since it further relieves the patient of the necessity of living the "time-table sort of existence" that is so essential with the use of regular insulin.

In the treatment of out-patients with Z.P.I., however, it is expedient to adhere to the following rules:—

(1) Always give the injection in the morning.

(2) Never give two doses a day.

(3) At the beginning of treatment never give large doses of Z.P.I. unless the patient is in hospital or under such conditions that he can be closely observed.

Insistence upon these rules is based upon the duration of action of Z.P.I. In view of the tendency to act for longer than 24 hours it is advisable that any overlap should occur during the daytime, and not when the patient is asleep.

To turn the severe diabetic into a physiological individual, so that the action of the normal pancreas can be imitated, a combination of the two types of insulin action is needed—the steady slow action of Z.P.I. to imitate the small constant secretion necessary to keep endogenous sugar under control and the strong rapid action of soluble insulin to deal with ingested sugar after carbohydrate meals. This can be achieved by mixing soluble and zinc protamine insulin in the correct proportions and giving them at one injection, so that the former controls post-prandial hyperglycæmia while the Z.P.I. comes into action later in the day and keeps the blood-sugar normal throughout the night.

When it is necessary to add soluble insulin to Z.P.I. the injection must be given before breakfast, as a mixed dose would certainly result in hypoglycæmia if administered at night.

Although some physicians recommend the simultaneous injection of soluble and Z.P.I. when both varieties are necessary, on the grounds that soluble and Z.P.I. can be given in the same syringe and injected into the same place and each retains its characteristic action, it is better to use different syringes. This procedure embodies but one injection and lessens the chance of errors in measurement. The same needle is employed where two separate syringes are used. The soluble insulin is injected first. The needle is slightly withdrawn, rotated 90–180 degrees, and the Z.P.I. then injected. This method allows for exact measurement of the soluble and Z.P.I. and ensures that their respective actions are retained.

However, if only one syringe is available and regular insulin and Z.P.I. are given the one after the other with the same syringe, the regular insulin should be given first. Should the Z.P.I. precede the regular insulin in the syringe, enough of the protamine may remain on the surface of the same to change the regular insulin to Z.P.I. and thus eliminate its specific action.

Z.P.I. will keep. There is little if any doubt that it will last for six months with a deterioration of only 10 per cent., even though, contrary to good practice, it is not in a refrigerator all the time.

Z.P.I. can be used with syringes which have been sterilised with alcohol, so that patients who

have adopted this method of sterilisation can continue it and need not change to sterilisation and drying their syringes with heat.

Advantages of Zinc Protamine Insulin.—(1) *Reduction in number of injections.*—Z.P.I. is more slowly absorbed from the tissues than soluble insulin and causes little lowering of the blood-sugar for 3–6 hours after the injection of a single dose. It exerts its hypoglycæmic action over a longer period of time than soluble insulin, for which reason it possesses the advantage over soluble insulin that, with adequate dosage, less frequent injections of it are necessary in order to keep the blood-sugar within reasonably normal limits for the whole 24 hours. In many instances, indeed, one injection of Z.P.I. may be found sufficient, whereas two, three or even four of ordinary insulin may be found necessary for the same purpose. Naturally, the diminution in the number of injections is highly appreciated by the patient, and Z.P.I. is especially a great comfort to children in relieving them of multiple injections. For this reason alone the introduction of Z.P.I. must be considered a notable achievement and one of the great advances in medicine.

(2) *Reduction in total dosage and a saving in units.*—With Z.P.I. not only is there a drastic reduction in the number of injections daily, but also a moderate reduction in the total dosage is possible.

Gordon B. Myers and Frank S. Perkin, working in Detroit, Michigan, October, 1937, have shown that a group of thirty-four patients were better controlled on a single dose of Z.P.I. averaging 37 units than on an average of 3.0 doses of soluble insulin daily, amounting to 51 units. The fasting levels were lower and the blood-sugars were better stabilised throughout the day with Z.P.I.

When large doses of soluble insulin are given to severe diabetics much is wasted, either by destruction in the tissues or more probably by excretion in the urine. The wastage of the slowly absorbed suspension insulin is much less. The dose is likely to be at the most only some 75 per cent. of the total previous insulin dosage. The addition of small amounts of soluble insulin necessary in some cases is still likely to leave the total number of units less in the new than in the old treatment.

(3) *Fall in Blood-sugar gradual so that hypoglycæmia cannot occur after the injection, insulin reactions less frequent, and ungovernable fluctuations between hyper- and hypo-glycæmia eliminated.*—Owing to the slowness of the absorption of Z.P.I. no sudden reduction of blood-sugar will take place, so that the not infrequent hypoglycæmic attacks in diabetics treated with soluble insulin occur with much less frequency. This is a great advantage, especially in diabetics in whom exercise is followed by attacks of hypoglycæmia.

Since the fall in blood-sugar from Z.P.I. is more gradual than from soluble insulin, violent oscillations between hyper- and hypo-glycæmia sometimes experienced by severe diabetics on soluble insulin are eliminated.

(4) *No glycosuria or ketosis at night.*—The difference in action between soluble insulin and Z.P.I. seems to be due to the difference in their rates of absorption from the subcutaneous tissues. Soluble insulin begins to lower the blood-sugar from 15–30 minutes after the time of injection, and its action rarely lasts longer than 8–10 hours, however large the dose. On the other hand, Z.P.I. shows little, if any, effect on the blood-sugar in the first 3–6 hours after injection, and it continues its action for 24 hours when administered in moderate doses, while in larger doses it may continue to act even longer.

Owing to its slow action Z.P.I. controls the blood-sugar not only during the day, but in most cases during the night also. Which is why no glycosuria and ketosis should occur during the night, as often happens in patients treated with soluble insulin.

From the metabolic point of view the crowning achievement of Z.P.I. is the abolition of states of transient ketonæmia resulting from tissue breakdown. The complete absence of ketosis throughout the 24 hours is a striking feature, and even during the period of hyperglycæmia and glycosuria after a meal there is no recurrence of ketonuria as judged by the sensitive nitro-prusside test.

The high blood-cholesterol and lipæmia which are often features of severe diabetes tend to be reduced (Rabinovitch, 1936).

(5) *Treatment simpler, control better and patients happier.*—Patients who have been treated with both soluble insulin and Z.P.I. say that they have a greater sense of well-being with the latter. Possibly this is because of better control of the glycosuria and ketosis, the absence of hypoglycæmic attacks and the need for only one injection a day. In particular, children grow and develop better, and their healthiness is improved. Even multiple administrations of soluble insulin leave intervals when the patient is without the benefit of insulin. Possibly the more continuous action of Z.P.I. is responsible for the improvement in health reported by many patients while using Z.P.I.

(6) *Greater spreading out of dietary carbohydrate.*—The high carbohydrate can be spread more evenly over all the meals instead of confining the bulk of it to those following the injection of soluble insulin. The greater spreading out of dietary carbohydrate is an advantage, since the slowly-acting insulin does away with the necessity of crowding all the starchy foods into two meals.

Patients are generally well controlled by distributing the available carbohydrate as follows: one-sixth of the total at breakfast, one-third at dinner, one-third at supper, and one-sixth at bedtime.

(7) *Hepatomegaly corrected.*—A beneficial effect has also been noted whenever there is a disturbance of liver metabolism. Thus, hepatomegaly which has been observed in young patients, becomes less and hyperbilirubinæmia, if present, disappears.

(8) *No ill effects from zinc.*—In view of the fact that Z.P.I. is in such common use it is well to consider the possibility of any ill effects that are likely to accrue from the continued administration of zinc.

Apprehension has been expressed that continuous treatment with a material containing even a small amount of zinc ultimately might be injurious. There is little justification for such apprehension. The body readily excretes zinc, chiefly in the fæces, although some is found in the urine, and this is well illustrated by the failure of zinc to accumulate in the blood of workers who for years have been exposed to the fumes of zinc. It has also been shown that the administration of zinc to animals does not affect health, growth or reproductive capacity adversely.

In Z.P.I. the proportion of zinc to insulin is 1 mg. per 500 units, an amount which probably is smaller than that obtained from foods and cooking utensils. Accordingly, a daily injection of 50 units over a period of 40 years would entail the administration of less than a gramme and a half of zinc, the large bulk of which would undoubtedly be excreted. It is thus extremely unlikely that any injury will be caused by the amount of zinc retained when one remembers that the zinc content of an adult has been estimated to be over 2 grammes.

(9) *Lipodystrophy less.*—Ill effects from Z.P.I. are conspicuous by their absence. Local redness and swelling at the site of injection are so rare that they need not be considered. The occurrence of lipodystrophy at the site of the injections of Z.P.I. is lessened.

(10) *General considerations.*—Excellent results have been reported when hyperthyroidism is associated with diabetes.

The continuous insulin effect of the zinc protamine variety is of special advantage in the presence of infection during the course of which the risk of breakdown in carbohydrate tolerance is greatly increased.

Z.P.I. can also be used successfully as a supplement to soluble insulin in the treatment of diabetic coma.

Z.P.I. is the kind of insulin which the general practitioner and the majority of diabetics will find simplest and safest.

Correspondence

FUEL ECONOMY.

To the Editor of the GAZETTE.

SIR,—As I was sitting in the Wills Library recently and perspiring gently, I chanced to put my hand on the radiator, which, I found, to my surprise, was too hot to touch with comfort. There are eleven radiators in the Library and all were working most efficiently. The temperature was 80 deg. F.

I hope that this is not representative of the response to Lord Kemsley's Fuel economy appeal.

Yours, etc.,
PETER N. CARDEW.

Guy's Hospital, S.E.1.

MIXED BATHING.

To the Editor of the GAZETTE.

SIR,—I notice with much pleasure that the nurses' swimming bath is now open, both to the nursing staff and to students—but not to both at the same time. Surely in these days of enlightenment, the segregation of the sexes at swimming is a thing of the past, and the bath could be made available for mixed bathing all the time.

I know that many of the nurses feel much more strongly about this point than I do.

Yours, etc.,
D. E. MEREDITH BROWN.

Guy's Hospital, S.E.1.

QUALIFYING EXAMINATIONS.

To the Editor of the GAZETTE.

SIR,—Your space, I know, is valuable; but perhaps you will allow me to reply to Squadron-Leader F. Stafford Clark.

My complaint was not that I had failed to pass the Final M.B., B.S., but that the system should continue by which a student is led up the garden-path for about six years and then summarily rejected. It matters not a whit, presumably, to London University whether his "apprenticeship" during those six years has been completely satisfactory, and even whether he may have passed his Final Conjoint and be regarded, for that reason, as fit to practise. It is nearly on a par, of course, with the case of the Honours Graduates of a well-known school in the Midlands who sometimes fail to pass the London Conjoint. The fatuity of the whole thing is so obvious that the argument for a one-portal entrance to the profession becomes clamant if only to save the whole examination system from ridicule.

We shall want efficiency as much as, and probably more than, we did before the War, but efficiency in the ranks of medical practitioners is not going to be guaranteed by the possession of a London University degree. It is a curious fact that in literature on the stage, and in life itself the doctor of the piece is usually a Scotsman trained in Scotland and, to the general public, he is almost symbolical of our profession. I say this, though not a Scot myself.

When in the future the question of the length of the medical curriculum comes to be discussed once again in real earnest, it is to be hoped that the policy of those examining bodies who appear to be more interested in failing rather than in passing their candidates, will receive weighty consideration.

Yours, etc.,
" SENEX."

STUDENT HEALTH SERVICES.

To the Editor of the GAZETTE.

SIR,—Having read recently about a dozen official registers, journals and prospectuses of medical and dental schools in the U.S.A. and Canada, I was impressed by their concern in the type of student permitted to pursue their courses. I do not here wish to discuss the " inequality of men " nor yet enter the much laboured question of examinations. I should very much like to do so; however, I believe in constructive criticism and I have none under this head.

There is, however, another subject upon which the Americans have acted—in a way very much to my liking.

All the American universities and schools have student health services. For example, an extract from the " Official Register of Harvard University Dental School reads : " Each student is required to have his mouth put in a satisfactory condition, acceptable to the Department of Operative Dentistry. The mouth is examined and diagnosed, and recommendations for treatment made." This is merely a snip from an extensive system in active operation. Another quotation from the same journal says : " Realising the importance to the student of a sound, healthy body, the School maintains a service whose function is to prevent disease, so far as possible, and promote a high standard of health among the stiudents. . . ."

I see many objections to the establishment in Guy's of a " student health organisation," but still feel it would be a service well worth inaugurating. But, maybe, I am wrong, and we do not need students who are definitely well, but only students who are probably well !

Yours, etc.,
CYRIL DAVID BAKER,
Neurotic Student.
" Sunny Vale,"
Tunbridge Wells, Kent.

Sector News

Guy's Letter

GUY'S is not the most comfortable of places during this hot spell, but even we make the best of it. Faces and pates are taking on an ever-reddening hue. The tomato plants, bedded by all and sundry, in boxes and tubs in sunny spots all over the Hospital, are coming on apace, and the Nuffield House roof nightly accommodates one or two more people, coming up for a breath of air. The swimming-bath in the nurses' home is used on alternate days by the two sexes, which we suppose is very right, and is certainly terribly proper. In the subterranean operating theatre we all swim together.

The tragic explosion in the Borough on the evening of June 6th brought a lot of work and, although we are ever ready for such casualties, as there were not very many people in residence who were here in the days of " blitz," things did not run as smoothly as they did when last year we used to cope with five times that number of cases. Nevertheless, the work got done, and once again, learning from bitter experience, we shall be the better prepared for the Hun's devilment should he return.

At last the maternity ward has got back to Victoria, much to the joy of our Borough patients. The general comment of these people on the private rooms in Nuffield House was that they were very posh and all that, but they were a bit lonely. However, everyone is agreed that we were extremely lucky to be allowed this alternative accommodation, and is very grateful that we did not have to disband the maternity unit altogether and send the labour cases to other hospitals. Actually a number of cases did have to be sent to the L.C.C. hospitals, as we had not got room for them. Fortunately there were no " ambulance births " and, for the co-operation shown by the people who looked after these cases for us, we are extremely grateful.

H. A. R.

Hospital Information, etc.

Appointment

Miss M. Foster Smith has been appointed Matron of Albert Dock Hospital, London.

Changes of Address

Grant Massie, Colonel R.A.M.C., Medical Administration Headquarters, Army Headquarters, New Delhi, India.

R. N. Ironside, Wing Commander R.A.F., c/o Ford's Hotel, Manchester Street, W.1.

Missing

We regret to report that Lieut. M. T. O'Sullivan, R.A.M.C., has been missing since the fall of Singapore.

Births

BURT.—On May 22nd, 1942, to Nancy (née Johnson), wife of S. E. Burt, Capt. A.D. Corps, India—a daughter.

PINCHING.—On May 28th, 1942, to Wilhelmina wife of John Pinching, M.R.C.S.—a son (William Fedde James).

Deaths

PAGE.—On June 2nd, 1942, at Hurlingham Court, Fulham, Harry M. Page, F.R.C.S., aged eighty-one years.

ACKNOWLEDGMENT.

To whom it may concern ! Sir H. Wimpole and F. Schwite, M.D., beg to acknowledge a handsome gift of cigarettes. They express their eternal indebtedness to the fair benefactress or generous benefactor, and hasten to add that contributions such as clothing coupons and spare ration books will be greatfully received.

Sir H. Wimpole is in immediate need of a warm kummer-bund or woollen body belt (waist 62 inches), and one pair of goloshes, size 5, suitable for commando operations.

EDS. { H.F.O. P.L.M.

GUY'S HOSPITAL GAZETTE

A Journal of Medicine, Surgery, Dentistry and Hospital News

PUBLISHED FORTNIGHTLY

Volume LVI — *27th June* 1942 — *Number* 1407

PASSIM

THE Allied slogan is " Attack ! " The day of the Maginot-minded, the sit-tight, and time-is-on-our-side men is over The role of every citizen changes with this changed outlook. The hospitals must prepare for the offensive and, although this work is not so spectacular as that of the iron divisions, it makes those divisions stronger.

There is much to be done. This winter every ship will be needed for great enterprises ; not only must there be no waste in the usual sense, but every rod of waste ground must be used to grow food. Good examples can be seen in Guy's of laudable enterprise in Singleton's garden and the Matron's garden in the basement of the burnt-out Counting House. The lack of soil can be overcome by using the chemical solutions advocated by Gericke and described fully in the Penguin book on hydroponics. The numerous basements round Guy's would provide room for sheltered troughs, which would, with a certain amount of work and attention, provide tons of potatoes and tomatoes. The troughs could be made from bricks, and the pharmacy could make up the special chemicals and advise upon their use. Preparations made this year will prevent delays next spring.

A good deal of digging seems to be in progress throughout the Sector. Each hospital must plan to increase its acreage under cultivation this year. Gardening is an excellent way of keeping fit ; it is an occupation which the strong and the feeble, the very old and the very young can all undertake. There is no game which can compare with it for usefulness. Not all games should stop, but some proportion of the sports ground at H.O.P., say one pitch, should be under cultivation. We understand that the golf course at The Wildernesse is a fine stretch of turf. In war golf is the least social of games ; it takes up much ground that should be cultivated and the fairways and greens need much care. This summer and autumn should see preparations to make the hospitals throughout Sector X self supporting for vegetables in 1943.

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IN the meanwhile the experience accumulated at Guy's from the 1,500 cases treated during the raids is being made available to all those who are to attend classes held every Friday afternoon at five. So far the response has been only moderate. This is partly due to the examinations in season, and partly to the delusion held by some men that there is nothing to learn. The delayed bomb explosion in Gurney Street three weeks ago, a harsh aftermath of the " blitz," tested all the A.R.P. services. Many of the casualties came to Guy's and the standard of efficiency of winter 1940 was maintained, but there were a number of minor deficiencies due to the long lull. These deficiencies did not affect the treatment of the patients, but meant that people ran about too much and wasted their energy. In the early days of the bombing everyone ran everywhere ; each new casualty was met by a scrummage of dressers and undressers surging round the stretcher. Later, when the organisation was at its best, people knew their jobs so well that during raids most of the time was spent waiting for casualties in gossiping, playing cards, reading, listening to the gramophone, debating and other pleasant occupations. One such night, noisy but slack for Guy's, a visitor who went round the Hospital, complained that there were too many men doing nothing. He did not realise that this was a high compliment, for he had mistaken the ease gained by practice for idleness.

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A MODIFIED form of the appointments system is being applied to Back Surgery, and it is hoped to reduce the longest time that any patient need wait to under one hour—still a long time, but much better than before. With the appointment desks Out-patients hall has become even more confusing and the patient who misses the porter at the entrance may drift about for some minutes asking others as ignorant as himself where to go. This will soon be remedied by a number of large clear notices. We would suggest that one of these should show the way from front surgery to out-patients' hall, and so save members of that department a number of expeditions every day to guide patients who wish to make appointments.

DURING the coming months, as the War becomes more savage and the fighting even heavier, it is certain that more doctors will be called upon to serve with the Forces, and that the Hospital will find it harder to deal with civilian illness and accidents. It is becoming clear that defensive medicine, like defensive soldiering, does not pay; we cannot afford to wait until patients are so ill that they only come to hospital as serious cases requiring prolonged treatment. The report of the Peckham Health Centre shows that much ill-health goes undetected until there is a catastrophe with grave disability or death.

In Out-patients' hall, especially outside the pharmacy, where some delay is inevitable while prescriptions are made up, many people stand and stare, and they do this with the stolid indifference of the poet's sheep and cows. The Hospital is the place where propaganda for health should be most active. Anyone who has visited one of the poster displays of the Ministry of Information knows what a useful educational weapon these can be. Many posters can be had from various Government Departments and societies free of charge. Others can be bought for a small sum of money and the famous bomb chart made by members of the Works Department and the notices for the Hospital dances show that there is plenty of local talent.

There are rules for publicity work of this kind. One subject must be done at a time and pushed without scruple or delicacy. " Good taste " is out of place in important matters. The display should be marshalled by brief and impressive captions, and there should be an opportunity to get it for those who want more information.

We suggest that if this is started the first thing should be to support the B.M.A.'s diphtheria immunisation drive which is an all-out effort to have every child in Britain under the age of five immunised by Christmas. Eight or nine posters appealing to emotions ranging from love for children to national pride (this would contrast the London and New York diphtheria figures since mass-immunisation was introduced there) could be supplemented by a number of testimonials urging parents to support this measure from members of the Staff with whose names the patients are all familiar. The patent medicine monger has used this testimonial method for so long that it would be rare irony to employ what has often been a racket for so good and excellent a cause. Many other aspects of preventive medicine could be dealt with in this way, such as scabies, lice and industrial accidents. But there is another use for it; in nearly every department the physician or surgeon in charge would probably like to draw the attention of his patients to facts which concern them all. For instance, in Back Surgery it is often found that minor infections of the hand end up as serious and disabling conditions, because the patient does not take the advice given. This neglect is usually due to a praiseworthy anxiety to return to work. A grim admonitory poster which does not spare the feelings of the squeamish would help to save many working hours and contribute to the War effort by making for closer co-operation between medicine and industry.

THE Medical School Council have decided to bring back the first two clinical appointments to Guy's on July 16th. Surgical Ward Clerk and Pre-clinical are to be combined as a single appointment to fit in with the General Medical Council's decision to allow the final examinations to be taken three months earlier. We hope to deal more fully with this good news in a later issue.

WE record with pleasure the promotions of Group Captain J. J. Conybeare and Group Captain C. P. Symonds to the rank of Air Commodore. Air Commodore Conybeare, M.C., is now back at Guy's, and we hope that, in spite of his heavy official duties, that he will be able to find time for some clinical medicine and to go round the wards occasionally.

ON going to press we learn with deep regret of the death of Mr. Herbert Beale, for forty years clerk to the Superintendent's Office. Mr. Beale was held in high esteem by everyone at Guy's. We have received appreciations of his work which will be published in our next issue.

OBITUARY

DR. R. KING BROWN, formerly M.O H. for Bermondsey, died at his home at Goring-by-Sea on April 28th. Guy's men remember him as our lecturer on public health here for many years. During his twenty-three years at Bermondsey he did much good work. He enabled some three thousand families in the borough who were living in one room to be accommodated in municipal houses suited to their needs. He was one of the early workers in actinotherapy. He established a solarium based on the experience of Otto Bernhard, of St Moritz, whose book on light treatment in surgery he translated into English; and he induced his borough to reserve six beds at Leysin for the treatment of children with surgical tubercle. For several years he was medical editor of the *British Journal of Physical Medicine*. His granddaughter is a masseuse at Guy's.

Zinc Protamine Insulin

By G. R. W. N. Luntz

II.—DISADVANTAGES AND ARRANGEMENT OF DIET.

THE shortcomings of Z.P.I. are attributable to its slow and prolonged action. They are as follows :—

(1) *Post-prandial glycosuria poorly controlled.*—Owing to the slowness with which Z.P.I. comes into action, at least 3–6 hours, a dose given before breakfast, as is generally the case, is incapable of controlling the inflow of sugar from that meal (post-breakfast glycosuria resulting), but later in the day, when its action has developed, the inflow of sugar from the gut is adequately restrained.

In such cases the most satisfactory way of overcoming the drawback is to give along with the Z.P.I. a small requisite dose of soluble insulin and this, coming into action rapidly (within 15–30 minutes of the injection), restrains the effect of breakfast and exerts its effect until the Z.P.I. starts to act.

It should be remembered that there is no return of ketosis with this hyperglycæmia after food.

(2) *Rate of absorption may vary from day to day.*—As Z.P.I. is less soluble the rate of absorption, being dependant on the state of the vascularity of the tissues into which it is injected, may vary from day to day, and consequently so may the concentration of the blood-sugar.

In some patients the incidence of irregular absorption from the site of injection is more frequent than with soluble insulin. This probably explains the odd bouts of glycosuria in subjects apparently well balanced. The action of soluble insulin is more regular from day to day, no doubt because it enters the general circulation so rapidly and completely.

(3) *Hypoglycæmic reactions more severe and protracted.*—While the symptoms of hypoglycæmia usually occur less frequently with Z.P.I., exceptions occur and, in some instances, the reactions encountered have been more severe and protracted than those usually seen with soluble insulin.

The symptoms differ from those of soluble insulin by the absence usually of those manifold manifestations which have been attributed to the protective discharge of adrenaline. The reduction in blood-sugar is so gradual that the suprarenal glands apparently are not aroused, and the secretion of adrenaline, a safety mechanism, is not called forth. Most of the premonitory symptoms of hypoglycæmia—e.g., shakiness, tremors, emptiness, hunger, sweating, tachycardia, pounding pulses, faintness, etc.—are usually ascribed to the adrenaline secretion.

In the hypoglycæmia after Z.P.I., the first effects are referable to cerebral disturbances. Drowsiness, nausea and headache are observed, or, at first, there may be nothing more than a vague feeling of fatigue and malaise which cannot be differentiated from fatigue from other causes. It is followed by increasing weakness and then by a little numbness about the mouth or at the ends of the extremities.

These symptoms are easily recognisable in most cases, but the patient must be taught to attend to them before increasing drowsiness and mental dulness make him incompetent. Drowsiness, when it first appears, may escape detection, particularly if the patient is busy in the performance of a task requiring physical activity. The principal difficulty, without question, is the early effect on the mind, which interferes with the patient's judgment and leads him to neglect taking precautions to avoid further trouble. Later, not only is he unable to help himself, but actual negativism develops and he resists the attempts of others to help him.

Finally, the signs of the disturbance become more apparent; the drowsiness increases or, in some cases, euphoria develops, or delirium, or muscular incoordination, with twitchings of muscles, contortion of the face, or actual convulsions.

Moreover, the fall in blood-sugar is so slow with Z.P.I. that a much lower level of blood-sugar has to be reached before any hypoglycæmic symptoms present themselves; the blood-sugar level may fall as low as 40 mg. per 100 cc. before symptoms of hypoglycæmia appear.

Since the effect of Z.P.I. is so slow, the response to treatment can be expected to be slow also, for the prolonged action maintains the blood-sugar at a low level by its depressing effect, even though it may be raised by the administration of glucose. The rapid recovery after adrenalin or glucose does not occur, and, when apparent recovery has taken place the effect of the Z.P.I. may outlast the effects of the glucose administered, so that repeated administration of glucose is essential.

The seriousness of the hypoglycæmic reactions arises from the fact that they are often insidious in onset, and the patient is liable to develop severe symptoms without warning. There is no doubt that hypoglycæmic attacks are not nearly so

common with Z.P.I. as with soluble insulin, but when they do occur they are often much more severe, taking the form of convulsions or sudden unconsciousness. Reports appear from time to time of patients who have wakened in the morning with sore, stiffened muscles and bitten tongues as evidence of nocturnal convulsions.

Russell M. Wilder, of Minnesota (1937), described a patient of his as having expressed the remark: "I don't have diabetes any more; I have insulin reactions."

Further, as the action of Z.P.I. extends for twenty-four hours, and as it takes longer to exert its maximum effect than soluble insulin, hypoglycæmic reactions are prone to occur during the night or sleeping hours, when the injection is given before breakfast. At night the insulin action is unopposed by the inflow of food, and, as in the case of ordinary insulin, such attacks are more readily induced in the young. The important thing is, of course, to prevent these attacks from occurring. And such reactions may usually be prevented by a bedtime feeding.

The hypoglycæmic effect of exercise and muscular exertion raises important considerations in the use of Z.P.I. It is well recognised that unusual exercise makes diabetics on soluble insulin more liable to hypoglycæmia, but this is limited to the time of its maximum action, which can be foreseen and avoided.

Z.P.I., however, with its prolonged action, makes unusual exercise apt to produce hypoglycæmia at almost any time of the day, and the hypoglycæmic effect of muscular exercise may be considered another complication which is encountered more regularly with Z.P.I. This adds to the difficulty of treatment because it either necessitates careful regulation of the amount of exercise, so as to keep it constant from day to day, or demands the administration of extra carbohydrate before and after the exertion, to neutralise the depressing effect of the exercise on the blood-sugar. Many of the severe night reactions follow afternoon swimming and tennis or a long game of golf.

The giving of extra carbohydrate before or during exercise is by far the most rational treatment, for a reduction of the insulin dose would permit recurrent hyperglycæmia next morning, and careful regulation of the amount of exercise would impose restrictions on the patient and introduce a "time-table existence."

(4) *Treatment of emergencies.*—The treatment of coma and of the acute emergencies of diabetes, such as accompanying infection or are provoked by fracture of bones or by surgical procedures, would seem to call for a quicker acting insulin than Z.P.I. However, while the principal demands may need to be met by soluble insulin, the supplementary use of Z.P.I. has seemed to be very helpful.

The Lancet, in an editorial (March 6th, 1937) said that most authorities agree that soluble insulin should always be preferred for diabetic coma. In cases of diabetes complicated by infection or coma it is wise to rely at present upon the use of soluble insulin, for urgent clinical ketosis demands rapid insulin action, and for this reason soluble insulin stands as the best method of treatment. Z.P.I. is probably very useful in the treatment of diabetic coma when injected in addition to soluble insulin, since it comes into action 6–8 hours later, maintaining, by checking any recurrence of hyperglycæmia, the improvement already secured by soluble insulin.

The presence of diarrhœal and other conditions which tend to make the absorption of food variable, renders the use of slowly-acting Z.P.I. unsafe, by increasing the risk of hypoglycæmic reactions. (Wilder, 1938.)

Hypothyroidism, by increasing the sensitivity of the patient to the action of insulin, is also said to be a contraindication.

H. O. Mosenthal states that in some patients nervous tension produces marked hyperglycæmia, and for the control of transient glycosuria in these patients soluble insulin is to be preferred.

Explanation for Discontinuance of Z.P.I.—Many of the poor results which have been obtained with Z.P.I. are undoubtedly due to lack of patients' co-operation, whether as a result of low mental calibre or of sheer neglect. Thus, carelessness with the dietary régime is one of the most potent causes of failure and mishap.

The reasons why diabetics discontinue Z.P.I. may be enumerated thus :—

(1) Sugar-free without insulin (when on a careful diet).
(2) Hypoglycæmic reactions.
(3) Un-cooperative (either psychotic or unintelligent).
(4) Poor diabetic control.
(5) Local allergic responses (painful indurated areas at the site of injection).
(6) Irregular mode of living.
(7) Insufficient time for adjustment.

At the very outside, however, the number of diabetic patients who cannot use Z.P.I. successfully, because of any of the above reasons, is less than 5 per cent. Certainly Z.P.I. should not be withheld from the great mass of diabetics merely because an occasional patient seems not to derive great advantage with its use.

Arrangement of Diet with Z.P.I.—All observers agree that the diet need not be so strictly regulated

with Z.P.I. The patient may be allowed a good deal more latitude, and may, to some extent, be guided by his appetite as regards the amount eaten at a particular meal. Patients are allowed to select their own diets within reason, provided they keep to approximately the same amounts for each day. The size of each meal may vary considerably so long as the total intake for the day does not vary materially.

One of the principal advantages of Z.P.I. is the ability to spread out the dietary carbohydrate throughout the day instead of concentrating it in the meals associated with the administration of soluble insulin.

Indeed, frequent administration of small amounts of carbohydrate is indicated for two reasons :—

(1) In order that there should frequently be made available supplies of carbohydrate to prevent the steady reduction of blood-sugar to uncomfortably low levels ; and

(2) In order to avoid an excessive rise of blood-sugar and consequent glycosuria which is liable to occur when a large amount of carbohydrate is ingested at one time.

A further benefit is suggested by the Staub-Traugott phenomenon which indicates that frequent intake of small amounts of carbohydrate facilitates its utilisation.

As regards total daily amount it has become the general practice to allow liberal amounts of carbohydrate in the diet of diabetics on insulin. The advent of Z.P.I. has enabled one to allow an even more liberal supply. Each case must be considered on its own merits, since there are wide individual variations in the optimal amount of carbohydrate in the diet, but anything from 120 to 300 grammes can be allowed, depending on the carbohydrate tolerance of the patient.

In allowing high carbohydrate diets the distribution of the carbohydrate must be carefully arranged. The arrangement of dietary carbohydrate must guard against the occurrence of hypoglycæmic attacks. These may occur at any time, but are most likely to take place in the late evening and during the night. Accordingly, carbohydrate should be allowed at tea-time and also before going to bed.

It is customary with soluble insulin to order most carbohydrate at the two meals which follow the morning and evening injections, 200 grammes being taken as :—

Soluble insulin.

Breakfast	65 grammes.
Lunch	45 „
Tea	20 „
Soluble Insulin.	
Supper	70 „

Z.P.I. is a long acting insulin, the period of activity lasting 24–48 hours. The calorie intake is divided into one-fifth for breakfast, two-fifths for lunch and two-fifths for supper, as Z.P.I. administered in the morning produces its maximum effect late in the day.

Further, to supply the greatest amount of available carbohydrate in the latter part of the day, the protein content of the diet (which is 58 per cent. carbohydrate) is subdivided into one-sixth for breakfast, one-third for lunch and one-half for supper. It is advisable to allow the patient a small amount of food, taken from his diet, to be utilised late in the evening, since at this time the greatest effect of Z.P.I. takes place and midnight reactions are obviated.

A suitable arrangement of 200 grammes would be :—

Zinc protamine insulin.

Breakfast	40 grammes.
Lunch	40 „
Tea	40 „
Supper	55 „
Bedtime	25 „

The principle governing the administration of Z.P.I. is that the first object of the Z.P.I. should be the control of the disease during the night, and the second object the restraint of the morbidly exaggerated rises in the sugar content of the body which occurs after meals. It is only in mild cases that Z.P.I. controls the disease during the whole twenty-four hours. In cases of any severity the action of the Z.P.I. should be reinforced by the administration of soluble insulin to suppress the hyperglycæmia following meals. The simultaneous injection of a small dose of ordinary insulin together with the Z.P.I. results in adequate control of the diabetes, not only during the night, but also controls the post-prandial blood-sugar level.

In severe cases, where soluble is added to suspension insulin, more carbohydrate should be given at breakfast time. The arrangement of 200 grammes would then be as follows :—

Zinc protamine insulin with soluble insulin.

Breakfast	65 grammes.
Lunch	35 „
Tea	30 „
Supper	50 „
Bedtime	20 „

Variations in the amount of carbohydrate at each meal should be made in each individual case to strike the best balance between glycosuria and hypoglycæmia. The obvious ideal is to have the carbohydrate so apportioned that when dosage of Z.P.I. and unmodified insulin has been properly adjusted, the control effected will involve no undesirable hypoglycæmia, hyperglycæmia or glycosuria at any time of the day or night.

Since muscular work always accelerates the utilisation of sugar, any unwonted exercise should be associated with an extra ration of carbohydrate.

Indications for Use of Z.P.I.—From what has already been said it is obvious that Z.P.I. is not the ideal form of insulin for all cases, but it is of great value as an effective therapeutic agent :—

(1) In those cases in which nocturnal glycosuria reveals that soluble insulin has failed to control the disease during the night.
(2) In patients in whom exercise is liable rapidly to produce hypoglycæmia.
(3) When reduction of the number of daily injections is desired.
(4) In initiating insulin therapy.
(5) For the more elderly group of patients with glycosuria.

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Letters to My Nephew (i)

By Uncle Harry

MY DEAR GUY,—So you're off out East ! Your cousin Guy, who went out in 1938 as a squadron-leader, has just returned as a group-captain, after going through Greece, Crete and Libya. My old friend, the late Sir D'Arcy Power, and I used to engage in friendly and facetious controversy whenever we met on the subject of Guy's and Bart.'s, when I told him they practised medicine according to the gospel of Rahere. When he tried to " come it " about Bart.'s I had one retort to which he had no reply. " If you all think so much of the place, why is it that none of you seem to name your boys Bartholomew ? "

Well, you are going to have a great experience. What about kit ? You'll have your ordinary uniform such as is worn in England, including greatcoat and raincoat, but you'll want some tropical kit, too. If you are going to land out there in the hot weather, it's just as well to take one suit of tropical uniform out with you. Get the rest out there, where, although prices are higher now than before the War, they will only be a fraction of the price in England.

About Topees.—You'll notice that all topees are now lined with tin or silver-foil. That was my invention in 1924, when I lined my own and tried to get it generally adopted in place of the awful red lining which was then in use and which gave no protection. I think they must have had the photographer's ruby lamp in mind ! Do not waste money on buying an officer's pattern topee. Get a ration topee from store. It is lighter, cheaper and can more easily be replaced. Do not buy a tin uniform case. Get one or two " Marshall's trunks " ; they are absolutely air, water and insect proof. Your cousin Guy's were floating in the water for three days and everything was perfectly dry when they were salved. We all have them, including your Aunt and Cousin Dorothy. You can get them at the stores. You will, of course, have your camp kit, including bed, bath, wash-basin and Wolseley valise. Get a folding " Primus " lamp as well. They are complete in a small tin box and take up very little room. Mine has been a god-send, not only to me but to many others, who have shared its benefits in the matter of tea and hot water. Get spare nipples, needles, and a key for changing the nipples.

By the way, I always had a naval hammock in my kit, and there were many times when I used to sling it between two wagon wheels and sleep in luxury. If you can scrounge one, do so.

There's another thing you will find useful if you do not mind buying it—a spirit-proof syringe holder, invented by an old Guy's man and made by Down's. In the heat the ordinary spirit-proof holder is *not* spirit-proof and is usually empty when you want it next. The one I mean is spirit-proof even when kept at 70 deg. C. for six hours in a water bath. Under the same conditions the ordinary one is empty in about an hour. Alcohol boils at about 72 deg. C.

You must also get a pair of the dark-tinted Crookes' goggles. Sun is reflected from the yellow sand in a very unpleasant way, and a man can quite well be invalided for glare effects, especially a pilot. Always wear these on the ground in the hot weather. Glare effects are not noticeable above 500 feet. In a short letter such as the present there is not much time to say more about equipment.

What is your own position in the scheme of things ? When it comes down to brass tacks the sole *raison d'etre* of the medical officer is to act as a money saver. This may sound crude and sordid, but it is true. His objective is a double one, viz.—(*a*) to avoid the loss of man-hours by preventing illness, and (*b*) in curing wounds and sickness as quickly as possible, so that the men may be restored to the effective list with the loss of as few man-hours as possible. Thus he will minimise invalidings and the need for reinforcements which can only be provided at enormous cost—men, equipment, shipping, escorts, etc. Get these two essential principles into your head firmly and let them dominate and direct all your actions. You will then realise how important it is for you to supervise rigorously the proper clothing, feeding (especially water supplies) and housing of your men, and the treatment of minor ailments which might develop into something worse. Give frequent instruction to your men on how to safeguard their own health, but do it tactfully so that you don't " put the wind up " them. See that they are inspected and kept as free as possible from vermin and ticks. There are many insect insect vectors of disease and you must make yourself familiar with all of them. In Egypt, for example, about 80 to 90 per cent. of the inhabitants are infested with intestinal or blood parasites. I remember examining an Egyptian in his 2nd M.B. in practical histology and each candidate had been told to prepare, stain and examine a film of his own blood and do a differential count. This particular candidate was submitting his results to me

and I noticed that he said his eosinophiles were 10 per cent.; so I said, " Isn't that rather high ? " He gave a proud smirk and replied : " Ah, sir, but I have ascaris !"

Schistosomiasis and hookworm are the great curses of the East, and especially of Egypt. Bathing in irrigation canals and walking about in bare feet are the usual modes of infection respectively. The former can even be acquired by handling a wet fishing-line or washing the hands in the infested water—which should never be drunk without boiling. These dangers should be impressed on your men in your regular " health talks."

I discovered that Egyptian students always spotted sections of the prostate by the schistosoma eggs with which they are crowded in Egypt, so I set some sections of my own—prepared at Guy's—in one of the examinations. None of them were recognised !

By the way, before I close. I suppose you use one of those modern abominations, a safety razor. Take my tip and buy one or two " cut-throats " and learn how to use them and care for them. You will never suffer from a shortage of blades. Get a strop with leather on one side and canvas on the other. Dope it well with castor-oil, in which a *very small amount* of jeweller's rouge has been mixed, then let it dry. If you don't know how to strop a razor, ask your barber to give you a tip; it is very easy. You'll soon find that with a little confidence you will even be able to shave without a mirror and much closer than you can with a safety, which is little better than a miniature garden-hoe.

That's all this time. Remember me to your father and mother. I will write again on your way out and send it by air mail so that you will get it. There's a lot of rot written about the old school tie, which you can't wear in uniform in any case. So keep the slogan " Orange and Blue " in your inner conscienciousness !

Your affectionate,

UNCLE HARRY.

P.S.—Before you sail be sure to buy a copy of Daukes's " Barrier Charts," published for the Wellcome Bureau by Ballière, Tindall and Cox. You will find it of inestimable value.

Sector News

Farnborough Letter

SINCE the last Farnborough letter we have said goodbye to Dr. Coxon, who has joined the Army. We wish him all success in his new work. In his place we welcome Gerald Thomas, who is no stranger to us here. Dr. Hopkins has also departed for the Army. Otherwise the staff remains unchanged.

We have to report a very successful garden-party and dance, held at Bassett's on June 6th. The lovely garden was an ideal setting for the whole affair, and the heat of the day did not in any way lessen the enthusiasm of everybody for everything. There were side-shows, character reading, donkey rides and an extremely mixed three-legged race. Sister Jacques must be complimented on her influence with the Ministry of Food ! In the evening there was dancing; tickets for a bottle of whisky sold rapidly; the winner returned from the " White Lion " even more rapidly. The handsome profit of £54 has been sent to the Chancellor of the Exchequer. Our grateful thanks are due to Nurses Spong, Hawkins and Leighton, the organisers, for all their hard work.

Four days later strains of music from the Central Hall indicated the presence of the R.A.F. band playing at a well-attended dance.

Three weeks ago the gates at the back of the hospital, leading to Bassett's, were closed to all. People who live in this vicinity now have a very much longer walk to the hospital. Since then there have been sundry odd " happenings " at night and the authorities have been put to a great deal of trouble in reclaiming the gate from a neighbouring ditch and in repairing innumerable holes in the hedge. It is to be hoped that some agreement will be reached whereby the gate may be re-opened, at least at certain times of the day.

Professor Johnston is to visit us on June 25th to talk about post-war medical planning, and, maybe, we will have something to say about this in our next letter.

C. W. L. J.

Tunbridge Wells Letter

I ADDRESS the exile : the man who may be voluntarily leaning on a spade in the African sun; the past student who is gazing dreamily through salt-spangled eyes on some foreign seaboard; the recluse who has begun to wonder again what a student's days were like. I write to that host of sentimental travellers whose memories for ever return to what has been, but who show a grudging curiosity as to what is; to the " might-have-beens " I give a glimmer of light; to the participators, I hope, a glimmer of truth. For to dwell on the present relations of a student is to loiter on dangerous ground; it may be enough to brook the displeasure of those who cannot conceal the elevation they seem to derive from a comparatively Spartan condition; it is to contrast war with peace; it is to place a bread-pudding near a trifle and have the latter called temptation. Oh, no, this is not irony; it is only doubt—doubt as to whether they are human. A comparison of conditions is therefore not required; an attempt to applaud both times is not my intention. We will leave it to the exiles to judge of our effort; we will allow them to scoff if they wish; we will sanction their belittling remarks, but we will welcome their praise. For upon us has descended an abundance of work, which may be elevating. The question to be raised is whether it is elevating to the point of superiority; whether we as a generation of students, whose University days are born into a war-ridden world, are the better for it; whether our now diverse conditions make us more knowledgable, more fit for our future careers, more tolerant perhaps. I will not attempt to answer this; I will merely state the case, but I shall state the case in our favour.

Esconced in snug Tunbridge Wells is a strong body of students; that they are medical students is notoriously known; that they have strong views on vivisection and the like is also well known; that they work in prodigious fashion can be testified by all concerned; that they have the common traits of students is often overlooked, but that they are important to the country is self-evident, for they are reserved—reserved from full-time military service. To end the picture there would be to show the setting and leave the plot out; the setting is quite beautiful, but the plot is intriguing. For here a complication arises, an invasion threatens, and a home army must be bullied into shape. The threat is imminent and the man-power must be complete. The medical student is now a part-time soldier, disciplined (to a degree) but happy, if he is patriotic. Any qualms as to his services rendered are easily smoothed over by his attendance at parades; any qualms as to the amount of medical work accomplished may be (I say " may ") smoothed out by his parades—he is fulfilling a double task, and fulfilling it in all excellence. How does he shape, however, in the eyes of those whose sole work was medicine, who had probably multi

farious interests, but who had no overpowering duty to King and Country other than seeing that their bicycle-lamps were cleverly turned on at the right time; who turned Socialist because it sounded new and Bohemian; who felt the pressure of work on failing an exam. at the third shot—I must desist from comparing. How does this intrepid acceleration strike them? Are they amused; do they smile in piteous incomprehension; are they overawed. I assume they are interested.

Having arrived at the conclusion we are a type of soldier—what else are we? There is no need for suspense—we are students. We drink coffee, an understandable and rather prime luxury imbibed in a rather dilapidated room—a room not far removed from the dead-house, a haven of gossip, a scheming house for the malicious, a resting place for the flagging, and, finally, a room to drink coffee in. Here is an institution built around a counter. We dissect—an initiation to death—in a meticulous training ground, a nest of swarming human beings picking wretchedly with forceps and declaiming glibly in anatomical tongues, the nucleus of a lifetime's work. We juggle with test-tubes and wash-bottles; we burn our fingers and gaze dismally at rickety shelves and dirty sinks; we inhale H_2S. We attend lectures; we are refreshingly invigorated and suitably bored; we frequent swimming pools; we assimilate facts; we stare vaguely at printed pages; in summer we are tortured by the heat; in the winter we are tortured by the cold. So regard us, ye exiles, as blood brothers and cast a condescending eye on us. May I quote Louis MacNeice:—

"So I write these lines for you
Who have felt the death wish, too.
But your lust for life prevails,
Drinking coffee, telling tales."

E. S. F.

Correspondence

SHORTAGE OF DOCTORS.

To the Editor of the GAZETTE.

SIR,—The need of the country for more doctors at the present moment is said to be acute. We have heard much lately about the time of the clinical period of study for medical students being decreased; in fact, the Conjoint Board and Oxford have already decreased this period from thirty-three to thirty months. It has also been stated that the standard of the qualifying examinations is to be maintained.

With the decrease in the clinical period the standard can only be maintained by the introduction of two essentials. The first is that the students should work harder; and the second, that the standard of teaching should be maintained—or bettered. Of the first of these two essentials I think that it is a fact to say that medical students do work harder than they did in peace-time. With the price of beer as it is, they can do little else!

With regard to the second I think that the situation has to be very closely watched. At the beginning of the War a number of the Staff joined the Forces. The standard of teaching, however, did not decline to any noticeable extent, due to the fact that those of the Staff who remained worked harder and did more teaching, and also because the number of students attending any one round at Out-patients increased. Therefore, if this standard of teaching was to be maintained, it was essential that the number of the Staff should not be depleted below a certain minimum efficient level.

I claim that that minimum efficient level has been reached in Guy's during the course of the last six months. Therefore, I also claim that the students now up for Finals, and those who are to follow, are less well prepared for Finals than their predecessors. If, then, the standard of teaching is to be maintained at its present level it is highly necessary that no more members of the Staff should be allowed to join—or be made to join—the Forces from now onwards. It seems to be the impression in some quarters that a man is not doing his duty towards his country until he has gone through the simple process of putting on a uniform. This is, of course, absolute rot.

I think that to say that the teaching staff of a teaching hospital are key men in key positions is putting it mildly. If the Forces must have more doctors, surely it is obviously better for these key teaching men to continue to train more potential doctors than to be taken into the Forces themselves?

Yours, etc.,

Guy's Hospital, S.E.1. M. R. MULLINS.

MUSEUM SPECIMENS.

To the Editor of the GAZETTE.

SIR,—"Passim" has, in the current number, committed itself to an uninformed plea for museum facilities at this hospital. Whilst not wishing to arouse a discussion with regard to the editorial view that the Gordon Museum is "unsuitable for the use of the student," there can be little question that such a view betrays sad unfamiliarity with the museum in its modern form. "Passim" has, however, failed to acquaint itself with the facts regarding the "excellent collection of bottles at Farnborough" which "Dr. Navasquez has formed . . . for the use of students." This collection which was formed in the Pathological Department under the direction of Professor Donaldson between the years 1930 to 1934 was subsequently housed in the Gordon Museum owing to evacuation from the old Pathological Department, and transferred to Farnborough because it was felt that a larger number of students would be able to obtain access to it for study.

Dr. Navasquez would, I am sure, be the first to credit Professor Donaldson with this contribution to the teaching facilities in pathology, subsequently regrouped by Professor Payling Wright.

It is, of course, to be hoped that, when peaceful conditions return, this little student's collection will return to Guy's and remain separated from the bulk of specimens comprising the Gordon Museum collection, so that the student who quails at the "task of mastering the contents of the formidable array of bottles in the Gordon Museum" will still have his alternative.

Yours, etc.,

KEITH SIMPSON,

Astley Cooper Assistant to the Curator, Gordon Museum.

Department of Pathology,
Guy's Hospital, S.E.1.

(We thank Dr. Simpson for pointing out our error in attributing the formation of the collection of bottles at Farnborough to Dr. Navasquez. He appears to be unaware, however, that many students revise for their pathology exam. while at Guy's and would greatly appreciate a similar collection in the Gordon Museum. —ED.)

Sport

Rugby

GUY'S v. WASPS.

(Played at Sudbury on Saturday, April 11th.)

THIS, the last match of the season, was keen, fast and interesting throughout, with the forwards dominating the game. With Steeds, of Middlesex Hospital, hooking, the Wasps had a tremendous advantage in the set scrummages, but with so much of the ball it is a tribute to Guy's solid defence that their opponents were only able to cross the line once. Territorially, the Wasps had by far the better of the game, constantly attacking Guy's line, and it was a case of Guy's beating back these attacks between spasmodic raids.

The Wasps opened with a forward rush but were penalised for an infringement, and Guy's carried play to half-way, followed by the Wasps forcing a scrum on Guy's line, but again the pressure was relieved with a free-kick. Guy's had a chance in a million, but after Strathie had made the opening, Lillywhite lost confidence to go for the line and passed to Renton, who was promptly tackled.

The Wasps tried a drop kick which missed, and Harris made a nice touch kick. Guy's were penalised, but Compton's kick fell short. Scott got his three-quarters moving nicely, but Camp had little room to break through. Harris made a long run to the Wasps' half before being tackled, and after the Wasps had dribbled, Scott gathered the ball and ran about thirty yards, but could not quite keep his speed going and, unfortunately, the ball went loose. Twice in succession dangerous scrums on Guy's line were relieved by free-kicks.

In the first minute of the second period Mullins intercepted a pass and, with a fine burst, reached the Wasps' "25," where he passed to Renton, who, for some unaccountable reason, cross-kicked, when it appeared a score was certain, and the ball went dead. From a combined forward and three-quarter movement the Wasps actually got over, but one of their men had previously stepped into touch.

Guy's three-quarter line could not get moving smoothly, as they were always well covered. Camp and Mullins had a nice bout of passing, which ended in Strathie finding touch, but the Wasps' backs attacked with some crisp handling and were nearly through, but a pass was dropped and the movement finished with Compton kicking to touch near the corner flag.

Kyle was placed in possession and went with terrific speed along the line, but Morgan got across just in time to bring off a brilliant tackle. Morgan, the Wasps' full-back, who was the outstanding man on the field, kicked a fine length from a "mark." Lillywhite made headway with a nice dribble, but overran the ball, and the Wasps' forwards forced the ball over Guy's line for a "drop-out." Mullins intercepted another pass and transferred to Renton, who was pounced upon at once. Kyle had another dangerous run but again had little room for an opening.

A thoroughly deserved try came to the Wasps through Tarbot, who touched down following some clever dribbling by the Wasps' forwards. Guy's defended vigorously against strong attacks, but were penalised and Compton went close with the kick; Camp picked up, ran through, and nearly caught the Wasps napping by passing to Kyle, who was forced into touch. Camp made another effort with a nice dribble and kick up field, but the Wasps smothered the ball.

Score: Wasps, 1 try (3 points); Guy's, nil.

Team.—E. K. Harris; R. F. Camp, D. M. Strathie, P. L. Brangwin, J. B. Kyle; W. H. Lillywhite, N. I. Scott; J. D. Everall, A. B. Lee, R. G. L. Brittain, A. G. Albers, J. R. C. Matthews, T. W. Renton, J. Breen-Turner, M. R. Mullins (captain).

UNITED HOSPITALS SEVEN-A-SIDE COMPETITION.

(Played on the Athletic Ground, Richmond, on Saturday, April 18th.)

THE United Hospitals continued with their seven-a-side competition, which has become a popular annual fixture in place of the usual cup events. There is much to be said in favour of this competition, which draws all the hospitals' rugger players together on the same day.

It was not a good day for Guy's. They drew a bye to the second round where they met King's College Hospital, who had beaten Charing Cross after a hard game. In the first half against King's, Scott sent Strathie away and Kyle, taking a long pass, ran in for an unconverted try. Palmer scored for King's early in the second period and, when extra time appeared a certainty, a grand movement by Scott, Strathie and Camp, ended in Kyle crossing for a try, which Mullins converted.

In the Semi-Final, Middlesex, who had beaten London in the second round, were Guy's opponents. Guy's started off very well indeed. In the first minute Camp made a fine run to score the all-important first try, which Mullins converted. After this Middlesex had most of the play, due mainly to getting the ball from the scrums. Middlesex pressed hard and, after Breen-Turner had cleared a dangerous movement, Swanson ran clean through for an unconverted try. Guy's backs had few chances, but made an occasional burst. Swanson made a vigorous run, and gave a pass to Alexander, who crossed by the posts and converted himself. Strathie tried hard to win the game, but Middlesex were able to prevent him crossing.

Middlesex went on to meet Mary's in the final, but last year's surprise win of Middlesex was not repeated. Mary's had a grand combination, and although Middlesex fought hard were no match for their opponents, who scored three tries, Macrae two and Bennett one, all of which were converted by Macrae.

Guy's team in both games.—J. B. Kyle, R. F. Camp, D. M. Strathie, N. I. Scott, J. Breen-Turner, A. B. Lee. M. R. Mullins (captain).

RESULTS.

First Round.

Charing Cross	4 pts.	King's College	8 pts.
St. Thomas's	13 ,,	Westminster	nil.
St. Bart.'s	14 ,,	University Coll.	nil.

Second Round.

Middlesex	5 pts.	London	nil.
Guy's	8 ,,	King's College	3 ,,
St. Thomas's	21 ,,	St. George's	nil.
St. Bart's	nil	St. Mary's	8 ,,

Semi-Finals.

Guy's	5 pts.	Middlesex	8 pts.
St. Thomas's	5 ,,	St. Mary's	10 ,,

Final.

St. Mary's	15 pts.	Middlesex	nil.

Hospital Information, etc.

Birthday Honours

WE are glad to note that in the Birthday Honours list His Majesty has conferred a Companionship in the Military Division of the Order of the Bath upon Major-General D. Clewer. As a student at Guy's General Clewer was awarded the first and second years' prizes in Dental Subjects and obtained his L.D.S. and became a Dental House Surgeon in 1914. He then joined the Army as a dental officer and served with distinction in the last war, being mentioned in despatches in 1918. Later, as a Major, he served as Dental Officer, Gibraltar, and subsequently at H.Q. Eastern Command and as Inspector of Army Dental Services in India. Eventually General Clewer was appointed as Director of the Army Dental Service and was promoted Major-General in the Regular Army in 1940. Personality, with strength of character, has made him popular with all ranks and has greatly influenced the efficiency and prestige of the Corps which he directs. In reply to a letter of congratulation General Clewer modestly attributes some of his success to his training at Guy's, and he writes thus of the Army Dental Corps: "The work of the Corps has been magnificent and it is to all ranks that I owe the honour, for had it not been for their loyal and constant support I could never have attained it."

C.B. (Military).
Major-General Donald Clewer.
C.V.O.
Cedric Stanley Lane-Roberts, F.R.C.S.
C.B.E. (Civil).
Frank Douglas Turner, M.B.
O.B.E. (Military).
Surg.-Cmdr. Robert Cyril May, R.N.
O.B.E. (Civil).
Philip James Watkin, M.C., M.R.C.S., L.R.C.P.
Mentioned in Dispatches.
Wing Cmdr. J. C. Neely.

Pass List

The following have been successful at the recent examination for the M.R.C.P.:—
Surg.-Lieut. Anthony Chester Cranmer Hughes, M.B.Camb., L.R.C.P., R.N.V.R.
Cyril Wyllie Kesson, M.B.Lond.

University of London

The Secretary of the Medical School has sent us a copy of this letter received from the University of London:—

SIR,—I am directed to inform you that the Senate, at their meeting on June 17th, passed the following resolution:—

That, as a temporary measure during the period of the present shortage of medical practitioners, the length of the clinical course for the Final M.B., B.S. Examination be reduced from 36 months to 30 months, *i.e.*, 24 months for Part I and 30 months for Parts II and III; and that the matter be reconsidered during the third term of the session 1942–43.

No change has been made in the details of the course nor in the standard required for the Degrees.

Will you please make this resolution known to the students at your School who will be eligible to enter for the Examination, or part of it, next October. Entries for this examination must be received here on or before August 31st.

Yours, etc.,
H. V. TRUST,
Assistant to the Academic Registrar.
Senate House,
University of London, W.C.1.

Guy's Hospital Ladies' Association

The forty-fifth annual general meeting of the Guy's Hospital Ladies' Association was held at Guy's Hospital on June 16th, 1942. Professor Johnston was in the chair and was supported by the Lady Ebbisham, Chairman of the Ladies' Association and the Matron.

The meeting unanimously decided to hand over to the Hospital £560 10*s.* 8*d.* towards the endowment of beds and cots, and 2,508 garments which had been made and given by the members of the association during the past year.

The Matron thanked the members for their valuable help to the Hospital and spoke about the activities of the Guy's Farm. In a most interesting speech Professor Johnston outlined the possible future of Guy's.

A display of garments made by the London and Branch members was on view.

The Committee of the Ladies' Association would gladly welcome new members to the Association, and anyone interested is invited to write to the hon. secretary, Mrs. Arthur Bulleid, 17, North Avenue, West Ealing, W.13, who will be glad to supply all information.

Changes of Address

G. N. Wood, Major R.A.M.C., No. 11 Field Ambulance, Home Forces.

Missing

We regret to report that the following officers are missing in Malaya.—Captain H. M. S. G. Beadnell, R.A.M.C., and Lieutenant W. F. J. Weston, R.A.M.C.

Marriages

LOCKE—EDWARDS.—On May 9th, 1942, at Hatfield, Lieutenant H. E. Locke, R.A.M.C., to Gwenda Muriel Edwards, of Bosherston.

Births

WHEELER.—On May 27th, 1942, to Laurie (née Fullbrook), wife of Surgeon Lieut.-Commander S. J. Wheeler, Royal Navy—a son.

FRENCH.—On June 4th, 1942, to Yvonne (nèe Taylor) and Edward French, M.R.C.P.—a son (Michael).

Deaths

BEALE.—On June 17th, 1942, Herbert John Beale, for forty years Clerk to the Superintendent, Guy's Hospital, aged fifty-eight.

SUTCLIFFE.—On May 28th, at Old Colwyn, John Sutcliffe, M.R.C.S., late Medical Superintendent, Cheadle Royal.

EDS. { H.F.O. / P.L.M.